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The role of attachment in the coping and mental health of adolescents affected by parental AIDS.

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THE ROLE OF ATTACHMENT IN THE COPING AND MENTAL HEALTH OF ADOLESCENTS AFFECTED BY PARENTAL AIDS

A Dissertation Presented

by

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DEDICATION

This dissertation is dedicated to the courageous adolescents and their families who shared their lives and their struggles with me.

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ABSTRACT

THE ROLE OF ATTACHMENT IN THE COPING AND MENTAL HEALTH OF ADOLESCENTS AFFECTED BY PARENTAL AIDS

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Attachment theory (Bowlby, 1969) maintains that children's early experiences with primary caregivers evolve into internal working models which shape beliefs about the availability and responsiveness of others and worthiness of the self. These models, also called attachment styles, guide individuals' emotional and relational behaviors, particularly in times of stress. Research with adolescents and adults has demonstrated that individuals with different attachment styles cope with and adapt to stressful situations in different ways. The present study investigated the role of attachment in the coping and distress levels of 196 adolescents whose parents are living with or have died from Acquired Immune Deficiency Syndrome (AIDS). Attachment style was measured as both a continuous variable on the dimensions of anxiety and avoidance and as a categorical variable of four discrete styles -- secure, preoccupied, dismissing and fearful. When baseline perceptions of parental care and protection, disruption in maternal caregiving, gender, and ethnicity were controlled for, adolescents who had high levels of attachment

anxiety were more likely to use all types of coping strategies and have higher levels of mental distress than those with high levels of avoidance or those low on both avoidance and anxiety. Females who displayed a fearful style of attachment (i.e., high on both anxiety and avoidance) were less likely to use adaptive coping strategies. Contrary to expectations, securely attached adolescents did not report more adaptive coping strategies than insecures. The use of ruminative and distancing coping strategies partially mediated the relationship between attachment and the level of distress.

There was no differential effect of bereavement on attachment styles. Among bereaved adolescents, those who were living independently evidenced more attachment avoidance than those who had a caregiver and those who perceived their caregiver as warm and caring reported less grief than those who did not.

Implications, suggestions for future research and limitations are discussed.

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CHAPTER I

INTRODUCTION

Attachment theory has been used to explain the human propensity to seek out and maintain proximity to loved ones from infancy to adulthood (Bowlby, 1969). Based on observations of the behaviors elicited by separation from significant others -- from the temporary separations between parents and children to the ultimate separation between loved ones of any age from death -- Bowlby's attachment theory has had a profound effect on two separate but related lines of research: human development and bereavement.

Within the infant-primary caretaker relationship and continuing throughout childhood, children develop a style of monitoring the availability of a primary caretaker. This attachment style, usually observed when availability is threatened, develops through the lifespan into increasingly complex templates, or internal working models, of self, others and the world (Bowlby, 1969). A body of research has evolved describing how attachment style influences coping with new or stressful situations and how it shapes adolescent and adult patterns of relating with romantic partners and close others. In a separate line of research, attachment has been recognized as a major theory in explaining individual differences in reactions to bereavement. The present investigation was designed to bridge these two lines of inquiry by examining the influence of attachment styles in the coping strategies and adjustment of adolescents dealing with threatened or actual parental death.

The period of adolescence marks a time when internal working models, shaped by early relationship histories, are being revised and updated in order to meet current

demands and circumstances. The threatened or actual death of an attachment figure in adolescence may profoundly affect an adolescent's internal working models. The present study focuses on a population of adolescents whose parents are living with or have died from Acquired Immune Deficiency Syndrome (AIDS). It is estimated that over 125,000 children are affected by parental AIDS and 80,000 children in the United States have lost one or both parents to this disease (Michaels & Levine, 1992). Adolescents who are living with or bereaved by parental AIDS are often also coping with poverty, familial substance abuse, AIDS-related stigmatization, and anxiety about their own welfare. Thus, the aim of the present study was to examine the role of attachment in the coping and adjustment of adolescents living with or bereaved by parental AIDS. Secondly, the study examined attachment style and grief reactions among those adolescents bereaved by parental AIDS.

Review of the Literature

Attachment Theory

Attachment theory (Bowlby, 1969) postulates that children's early experiences with caregivers form the basis of a set of expectations about the availability and responsiveness of others, particularly in times of stress. Attachment relationships initially develop between the infant and the primary caretaker and start to become organized within the child during the second half of the first year. Bowlby's initial theories of attachment were based on his work with children abruptly separated from their parents as a result of illness, war, and poverty. His observations of children's reactions to parental separation and loss led him to conclude that humans have a hard-wired propensity to seek and maintain proximity to a central figure as a means of survival. He conceptualized

attachment in evolutionary terms as a behavioral system between infants and their primary caregivers that functions to protect the vulnerable infant. Attachment related behaviors are those behaviors that serve to maintain this bond while providing a sense of security and comfort in the relationship and that are elicited by threats to the caretaker's proximity. For example, looking, smiling, and crying in early infancy, and the proximity seeking, signaling, and following behaviors of young toddlers, are early adaptive behaviors which serve to elicit parental responses and maintain parental proximity as a means of survival. The nature of parental responsiveness and sensitivity to these affective signals shapes the way that children organize their emotional experiences. Sroufe and Waters (1977) reconceptualized attachment as an emotional construct that develops within the infant-primary caregiver dyadic relationship. The goal of attachment behaviors is to derive "felt security" rather than simply proximity. Defined in this way, the attachment behavioral system describes the infant's ability to use the attachment figure as a secure base to facilitate exploration of the environment and provide a safe haven of reassurance, protection, and comfort from frightful or alarming situations (Bowlby, 1969).

However, as Ainsworth and her colleagues (Ainsworth, Blehar, Waters, & Wall, 1978) demonstrated, different types of behavior are required to maintain felt security depending on the caregivers' anticipated availability. A secure attachment results from maternal responses that are fairly consistent, provided in a timely manner, and are appropriate to that particular infant. When a secure attachment is established, the child develops an internal working model of his relational world that is characterized by a sense of security and trust in self and others. When the mother is unpredictable or rejecting of

the infant, an insecure attachment results and the child's subsequent internal working model of the relational world is based on mechanisms initially developed to maintain felt security to the attachment figure (Holmes, 1993).

Ainsworth and her colleagues (1978) developed the Strange Situation procedure, a standardized measure used to assess the quality of the mother-child attachment relationship based on toddlers' reunion behaviors after brief separations from their mothers. Ainsworth, et al. categorized mother-child dyads into three patterns of attachment, that is, ways in which children use and relate to their mothers in conditions of perceived stress and danger. These patterns are: securely attached (B), insecure-avoidant (A) and insecure-ambivalent (C). Securely attached children, confident in the availability of the mother, use the mother as a "secure base" from which to derive comfort, refuel a sense of confidence in exploring the world away from the caregiver, and cope with the perceived attendant threats. In contrast, insecurely attached infants, while unable to draw effective and/or consistent comfort and help from the mother, nonetheless adopt strategies in an effort to maintain some proximity and the security it provides. Insecure-avoidant children tend to limit their affective interaction with the mother, sometimes to the point of ignoring her. They do not seek out the mother for help in stressful situations and instead, focus on toys or other objects. Their distress is as easily comforted by a stranger as by the mother. Ainsworth found that the mothers of these children tended to be rejecting and rebuffed the child's need for closeness, even stating their dislike of physical contact with the child. Insecure-ambivalent children on the other hand evidence a strong need for the caregiver but have difficulty deriving comfort when distressed. They are wary of novel

situations and have difficulty separating to explore. The mothers of these children responded inconsistently to the child's signals of distress or discomfort: sometimes they were overly affectionate, often to the point of being intrusive, while at other times they were unresponsive. Research with abused and neglected children or those whose primary caregiver evidences depression or other psychopathology has led to the identification of other insecure patterns. Children labeled disorganized/disoriented (Main & Solomon, 1986) or A/C (a combination of avoidant and ambivalent) (Crittenden, 1988) display no consistent pattern but still are unable to use the caregiver effectively. Their reunion behaviors include stereotypical movements or "frozen" postures with dazed facial expressions.

Implications of Early Attachment Styles

A large body of research has examined the association between early attachment classifications and later behavior. Infants (12 to 18 months) classified by Ainsworth's typology as securely attached were more likely at 24 months to engage in imaginative play, were more persistent and made better use of mother's suggestions during increasingly difficult tasks than their insecurely attached peers (Matas, Arend, & Sroufe, 1978). During preschool years, they demonstrated more ego resiliency (Arend, Gove, & Sroufe, 1979) and were more likely to be leaders among their peers and more sympathetic to peers' distress (Waters, Wippman, & Sroufe, 1979) than those who were rated as insecure in infancy. By age ten, securely attached children reported a greater quantity and quality of friendships with peers and were more willing to ask for help and in general, evidenced greater confidence in themselves and significant others (Grossman & Grossman, 1991).

Thus, the establishment of a secure attachment in infancy is related to later competent interpersonal relationships, healthy emotional regulation, and self-confidence.

Attachment in Adults

Initially, attachment styles are a byproduct of dyadic interaction but soon they consist of accumulated knowledge about attachment figures, the self, and attachment relationships (Rothbard & Shaver, 1994). Attachment experiences, repeated throughout childhood, form a set of "internal working models" (Bowlby, 1969) or a mental representation of self and others that helps to shape the individual's construction of subsequent relationships and view of self and others. These models are self-perpetuating because they predispose the individual toward interpreting subsequent attachment-related experiences in ways that are consistent with the models. Internal working models operate as unconscious rules providing a heuristic basis for interpreting, organizing, and filtering information relevant to attachment experiences (Main, Kaplan, & Cassidy, 1985).

As an unconscious process, Bowlby (1979) viewed working models as highly resistant to change and postulated that attachment behaviors developed early in life "characterize human beings from the cradle to the grave" (p.129). More recent attachment researchers have used Bowlby's general theoretical model and Ainsworth's typology to develop methods for assessing individual internal working models beyond infancy and their stability over time, as well as examining behavioral and relational correlates of specific attachment styles. Much of the empirical work devoted to assessing attachment beyond childhood has focused on adults, and many studies that examine adolescent attachment patterns have used the adult measures that are described below.

In an effort to test Bowlby's notion that a child's early attachment history has significant long-term effects on later behaviors, relationship styles, and ways of dealing with stress, George, Kaplan and Main (1985) developed the Adult Attachment Interview (AAI) to explore adults' representations of childhood attachments and their current internal working models. The AAI classifies adults into four patterns of attachment: three corresponding to Ainsworth's classification -- Autonomous (Secure), Preoccupied (Ambivalent), and Dismissing (Avoidant) -- plus an Unresolved category similar to the Disorganized/Disoriented pattern found in young children but reflecting signs of unresolved attachment-related trauma. Main and her colleagues (1985) argue that the way in which adults discuss their early parental relationships predicts their own infants' attachment classification. Studies using the AAI have found significant correspondence (75%) between mothers' conceptualization of their own childhood attachment and their children's attachment classifications in the Strange Situation (van IJzendoorn, 1995). For example, mothers who idealize their parents discussed the parents' attributes in very general terms but when asked for specific details and memories reported parental behaviors which were in fact quite rejecting. The infants of these mothers tended to avoid them during the reunion episodes of the Strange Situation. On the other hand, mothers who had no trouble recalling specific memories to support their general, positive statements about their parents and who presented coherent and balanced descriptions, were more likely to have infants who were securely attached at 12 months of age.

Building on Main's work, Hazan and Shaver (1987) observed that adults described their experience of romantic love in ways that mirror the three attachment styles observed

by Bowlby and Ainsworth in infants. Hazan and Shaver eloquently argued that romantic love is an attachment process whose underlying dynamics produce various relationship styles. Using a self-report measure, Hazan and Shaver found that adult attachment styles occurred in proportions similar to those reported in American studies of infant-mother attachment, with 56% qualified as secure, 25% as avoidant and 19% as ambivalent.

Bartholomew (Bartholomew & Horowitz, 1991) hypothesized that adult attachment styles are defined by two dimensions: a model of self as positive or negative and a model of others as positive or negative. In comparing Main's conceptualizations of adult attachment with Hazan and Shaver's work, she noted that adults identified as avoidant through the AAI interviews were those who denied experiencing subjective distress and downplayed the importance of attachment needs while self-reported avoidants in Hazan and Shaver's work were those who reported feeling subjective distress when they became close to others. Bartholomew suggested two distinct forms of avoidance, one she labeled Dismissing, which is conceptually similar to Main's avoidant category, and the other labeled Fearful, similar to the avoidants in Hazan and Shaver's conceptualizations. Bartholomew developed a self report measure based on the work of Hazan and Shaver which yields four attachment styles incorporating the two avoidant patterns: Secure (positive model of self and others); Preoccupied (negative model of self, positive model of others); Dismissing (positive model of self, negative model of others); and Fearful (negative models of self and others).

Attachment in Adolescents

The period of adolescence is a watershed in the course of human development. It involves an ongoing negotiation of a new way of relating to parents and family members while forming new and different relationships with friends and intimate love relationships (Elliott & Feldman, 1990). The increasing cognitive capacity during adolescence allows for thinking about internal models of self and parents allowing them to be revised and updated in light of current environmental demands (Kobak & Cole, 1994). Adolescents seek peers and romantic partners who have the potential to provide physical and/or psychological safety based on their working models (Berman & Sperling, 1994).

The changes in internal working models and the purposes they serve during adolescence have only recently begun to be examined. Attachment research in adolescence has drawn on concepts from both the adult and child attachment literatures. Research devoted to adolescents has primarily focused on college students with much less work devoted to younger adolescents, late adolescents not attending college, and low-income ethnic minorities.

Adolescent attachment measures fall into two broad categories. The first measure adolescents' internal working models using the semi-structured interviews originally designed for adults based on the work of Main, Hazan and Shaver, and Bartholomew with the AAI as the most widely used measure. The second category uses self-report instruments to measure adolescents' current or past attachment relationships to parents and peers using constructs extrapolated from Bowlby's general hypotheses.

Interview measures of adolescent internal working models. Kobak and Sceery (1988) were two of the first researchers to examine college students' representations of early attachment experiences using the AAI. They found that the students' strategies of affect regulation as self-reported and reported by close friends could be predicted by their attachment style as measured by the AAI. Other researchers using the AAI have examined the relationship between adolescent attachment and psychopathology. For example, Adam, Sheldon-Keller and West (1995) found a strong association between adolescent suicidality and a preoccupied/unresolved classification on the AAI. Rosenstein and Horowitz (1996) found a high concordance rate between the AAI classifications of psychiatrically hospitalized adolescents and their mothers' classifications. In their study, adolescents rated as dismissing were more likely to have a conduct disorder or substance abuse disorder while those rated as preoccupied were more likely to have affective disorders.

In a meta-analysis of attachment classifications using the AAI, van IJzendoorn and Bakermans-Kranenburg (1996) found that the distribution of attachment representation in adolescents and young adults attending college (48% secure; 21% dismissing; 12% preoccupied; and 20% unresolved) was similar to the distribution among middle class adult parents. While only one study in the meta-analysis examined economically disadvantaged teens (all of whom were teenage parents), the distribution within this group was much more similar to that within low-SES adults, reflecting high proportions of the dismissing (25%) and unresolved (28%) categories with a correspondingly lower proportion of secures (39%). Among low-SES adolescents, this difference was even more

pronounced as the majority of these adolescents were classified as either dismissing (36%) or unresolved (26%).

Self-report measures of attachment. Measures in the second category assess adolescent attachment to parents and peers using a self report format (see Lopez & Gover, 1993 and Lyddon, Bradford, & Nelson, 1993 for reviews). Typically, these instruments do not yield a classification of attachment style corresponding to the Ainsworth typology, but offer factorially derived subscales which correspond theoretically to underlying dimensions of attachment theory.

The Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987), for example, yields three factors -- trust, communication, and alienation -- which are related to the affective-cognitive dimensions of adolescents' trust in the accessibility and responsiveness of attachment figures. Two separate scales are scored for each of the three factors: one for a parent and the other for a peer. In the norming sample of adolescents and college students, ages 16 to 21, Armsden and Greenberg found that adolescents' perceived quality of attachment relationships to parents and peers was correlated with psychological well being. Using Bartholomew's (1990) two dimensions of attachment (model of self and model of other), Feeney, Noller and Hanrahan (1994) developed the Attachment Style Questionnaire (ASQ) to measure attachment style in young adolescents with little or no experience in romantic relationships. Their five factor solution (discomfort with closeness, self-confidence, relationships as secondary, preoccupation, need for approval) correlated significantly with measures of quality of parenting and personality measures.

One of the earliest and most widely used measures, the Parental Bonding Instrument (PBI) (Parker, Tupling, & Brown, 1979) was theoretically derived from Bowlby's assertion that caregivers must be available and responsive and must intervene in a judicious manner in order to avoid overprotection or neglect (Parker, 1994). The PBI yields two factors, Care and Overprotection, and may be reported separately for mother and father. High scores on the Care factor reflect affection, emotional warmth and empathy while low scores reflect an absence of these qualities such as emotional coldness, indifference, and neglect. High scores on the Overprotection factor represent intrusion, overprotection, control, and prevention of independent behavior while lower scores reflect allowance of independence and autonomy (Parker, et al., 1979). Four categories of parental style result: (a) optimal bonding -- high Care, low Overprotection; (b) weak bonding -- low Care, low Overprotection; (c) affectionate constraint -- high Care, high Overprotection; and (d) affectionless control -- low Care, high Overprotection. The PBI was originally administered to adults and asked subjects to remember their parents over their first sixteen years. It has been modified for use with adolescents (Kreisman, Richards, & Feldman, 1995). The PBI has excellent test-retest reliability over a period of ten years (Wilhelm & Parker, 1990). Research with monozygotic and dizygotic twins showed mean levels of sibling agreement on both scales of around .70 (Parker, 1986).

Rice and Cunningham (1997) administered the PBI to a large sample ($\underline{N}$ = 630) of Black and White college students attending a rural, public college in one of the poorest counties in the country. Overall, there were no significant differences between the

maternal Care and Overprotection factors between Black and White students although Black students had lower scores on the paternal Care factor than White students.

Several studies have examined the relationship between the PBI and other measures of attachment. Mallinckrodt, Coble, and Gantt (1995) compared maternal and paternal PBI scores with the three factors of the Adult Attachment Scale (AAS; Collins & Read, 1990) in a sample (N = 76) of college age women attending a university counseling center. The AAS yields three factors which represent the underlying dimensions of Hazan and Shaver's (1987) attachment measure: Depend refers to trusting others and depending upon them to be available; Anxiety refers to the level of anxiety in relationships; and Close refers to comfort with closeness and intimacy in relationships. Although Mallinckrodt and colleagues only reported correlations significant at the .01 level, they found moderate positive correlations between the PBI paternal Care score and the AAS Depend factor (r = .32) and moderate negative correlations between the PBI paternal Protection score and the AAS Close factor (r = -.34).

In a factor analysis of the subscales of five attachment measures, Heiss, Berman and Sperling (1996) found that the PBI maternal Care had a factor loading of .48 on the first factor solution called Autonomy versus Protection, which describes adolescent-parent relationships as supportive and fostering a sense of independence. They also found that the PBI maternal and paternal Overprotection factor had a high negative loadings (-.52 for father and -.79 for mother) on this factor. High scores on this subscale were correlated with feelings of affiliation, self-confidence and efficacy.

Recently, attachment researchers have argued that employing attachment measures that rate individuals along dimensions rather than classifying them into categories increases statistical power and allows for more meaningful variation among individuals (Brennan, Clark, & Shaver, 1998; Fraley & Waller, 1998). In an effort to provide researchers with a common, dimensional scale for assessing adult and late adolescent attachment, Brennan, et al. developed a multi-item measure for assessing adult romantic attachment by pooling 323 items from fourteen adult and adolescent attachment scales and administering them to 1,086 undergraduates with a median age of 18. Respondents also completed Bartholomew's (Bartholomew and Horowitz, 1991) categorical, forced-choice method. Sixty attachment constructs were identified which produced two major factors. These two factors, Avoidance and Anxiety, accounted for 62.8% of the variance in the 60 subscales and are conceptually equivalent to Bartholomew's four-category typology. The top three subscales of the Avoidance factor were avoidance of intimacy, discomfort with closeness, and self-reliance, while preoccupation, jealousy/fear of abandonment, and fear of rejection emerged as the subscales that were most representative of the Anxiety factor. From these two factors, an initial pattern of clusters revealed four distinct groups resembling Bartholomew's typology: secures scored low on Avoidance and Anxiety; preoccupieds scored low on Avoidance but high on Anxiety; dismissers scored high on Avoidance and low on Anxiety; and fearfuls scored high on both Anxiety and Avoidance. Brennan and colleagues note that the fearful category also incorporates Crittenden's (1988) A/C and Main and Solomon's (1986) disorganized/disoriented pattern.

Implications of attachment in adolescence. An impressive body of literature has demonstrated that adolescent attachment styles are related to a wide number of relational and behavioral variables.

In a meta-analytic review of adolescent attachment and adaptive behavior, Rice (1990) found consistent positive associations between self-reported measures of parental-adolescent attachment and measures of social and emotional adjustment, self-esteem, and identity. However, these associations varied as to the adolescent's current environment in that the associations were strongest prior to a major developmental transition (e.g., graduating from high school) and weaker once the transition was made (e.g., during sophomore year in college).

Using a large socioeconomically diverse, community sample which included both White and African-American adolescents (N = 1,989; age range 13-19), Cooper, Shaver, and Collins (1998) found that overall, the distribution of the three attachment patterns measured by Hazan & Shaver's (1987) instrument was roughly similar to those found in adult and middle-class college student samples. However, gender differences emerged among younger non-white respondents where males were more likely to report a secure pattern and females were more likely to report an avoidant pattern. The study also found that attachment was related to adjustment. In comparison to secures and avoidants, anxious-ambivalent adolescents were much more likely to report low self-esteem and intellectual competence, high levels of distress, especially hostility, and to engage in a higher number of delinquent behaviors. While avoidant and secure adolescents engaged in risky behaviors at similar rates, avoidant adolescents were more distressed and reported

lower self-esteem and intellectual competence. However, avoidants were less likely to use substances or to ever have had sex than either the secure or the anxious subjects.

The association between attachment styles and parental problem drinking was explored in a large sample of college freshmen (median age 19) using both Hazan and Shaver's (1987) three-category measure and Bartholomew's (1990) four category measure (Brennan, Shaver, & Tobey, 1991). Respondents who were classified as A/C on Hazan and Shaver's measure (that is, relatively high scores on both the avoidant and anxious scales) or as Fearful on Bartholomew's measure were more likely to have one or two parents who are problem drinkers. Brennan, et al. noted, however, that their sample contained an unusually high number of respondents who classified themselves as Fearful (31.7% of males and 43.0% of females), which may be related to the high rate of alcoholism in the municipality where the sample was obtained.

Continuity and Discontinuity in Attachment Style

Using both semi-structured interviews and self-reports, a large number of studies have demonstrated that internal working models solidified in childhood are related to a wide range of behavioral and social functioning. However, the majority of these studies have been cross-sectional. Several longitudinal studies do exist, however most of these have examined the later behavioral and relational correlates of specific attachment styles during the childhood years while fewer studies have examined the stability of attachment

styles between childhood and adolescence and adulthood, or stability within the developmental periods of adolescence and adulthood.

For example, several investigations have shown that the attachment classifications of 12 to 18 month old middle class children as measured by the Strange Situation paradigm are highly related to attachment classifications at age 6 (Main, et al., 1985) and age 10 (Grossman & Grossman, 1991). Waters and colleagues (Waters, Merrick, Treboux, Crowell, & Albersheim, 1995) used the Strange Situation attachment classifications of 50 white, middle class children (at ages 12 to 18 months) to predict their adult attachment patterns using the AAI 20 years later at ages 20 to 22. Thirty two (64%) subjects had the same attachment pattern in infancy as in young adulthood. When the data are examined by stability of insecure versus secure attachment style, 70% of the sample maintained their insecure or secure status. In a large sample of adult women, Klohnen and John (1998) found considerable attachment classification stability from ages 27 to 52 using Hazan and Shaver's three-category model (secure: $\underline{r}$ = .58; preoccupied: $\underline{r}$ = .58; avoidant: $\underline{r}$ = .49). However, other studies have found less continuity in various age groups. In contrast to middle class samples, children from economically disadvantaged families demonstrate considerably less concordance between attachment measured at 12 to 18 months of age and 6 to 7 months later (Thompson, Lamb, & Estes, 1983; Vaughn, Egeland, Sroufe, & Waters, 1979).

Several studies also suggest the types of experiences that may lead to changes in attachment style. In the Waters et al. (1995) study cited above, 18 out of the 50 subjects received different classifications from 12 months to young adulthood although the authors

did not report the type of change (e.g., secure to insecure). In the intervening years, ten of these eighteen subjects (56%) had experienced significant negative life events which included the death of a parent, parental divorce, life threatening illness in the parent or subject, parental psychiatric disorders, and physical or sexual abuse of the subject and which may have changed their secure pattern to an insecure pattern. Conversely, supportive, long-term relationships such as a securely attached marital partner or a therapy relationship have been found to change an individual's insecure pattern to a more secure style (Dozier & Tyrrell, 1998; Kirkpatrick & Davis, 1994).

In a review of the continuity and discontinuity of attachment patterns across the lifespan, Rothbard and Shaver (1994) concluded that since internal working models play a mediating role between the environment and subsequent behavior, significant environmental changes can lead to shifts in internal working models. As an adaptive function, internal working models may both assimilate experiences to existing working models as well as accommodate working models to fit new experiences. Clearly, more prospective and longitudinal studies are needed to better understand the life experiences which promote the stability and instability of attachment patterns.

Coping

Although coping has been defined in numerous ways, many theorists view coping essentially as a mediator of emotions through cognitive and behavioral efforts (Billings & Moos, 1981; Folkman & Lazarus, 1985; Rudolph, Dennig, & Weisz, 1995). Traditionally, coping has been studied in relation to stressors: specific life situations or events that an individual views as taxing and relevant to well-being (Folkman & Lazarus, 1985).

The purpose of coping is to reduce or eliminate the stressor or stressful condition or the associated negative emotions (Moos & Schaefer, 1986). Moos and Schaefer posit that major life transitions or crises set forth five major adaptive tasks which individuals manage using a variety of coping skills: (a) establishing the meaning and understand the personal significance of the situation; (b) confronting reality and responding to the requirements of the external situation; (c) sustaining relationships with family members and friends as well as with other individuals who may be helpful in resolving the crisis and its aftermath; (d) maintaining an emotional balance by managing upsetting feelings aroused by the situation; and (e) preserving a satisfactory self-image and maintaining a sense of competence and mastery.

Coping Strategies

In their initial conceptualizations, Folkman and Lazarus (1980) posited that coping has two main focuses: (a) to deal directly with the stressor or the problems it creates, called problem-focused coping and (b) to manage the emotions associated with the stressor, referred to as emotion-focused coping. Problem-focused coping is usually posited as an adaptive, positive way of dealing with stress, especially when individuals view the stressful event as controllable or, at the very least, believe that a behavioral response may reduce the stressor. Problem-focused coping, also referred to as instrumental, task-focused, constructive, or active, is the process of taking active steps to remove or circumvent the stressor or to ameliorate its effects. A wide body of literature has documented the adaptive function of problem-focused coping strategies in dealing with many types of stressors, including coping with illness (Namir, Wolcott, Fawzy, &

Alumbaugh, 1987; Pakenham, 1999), divorce (Birbaum, Orr, Mikulincer, & Florian, 1997), peer competence in middle childhood (Contreras, Kerns, Wiemer, Gentzler, Tomich, 2000), and difficult issues between romantic couples (Lussier, Sabourin, & Turgeon, 1997). However, the efficacy of problem-focused coping may be situationally related. For example, in situations under which individuals do not have personal control, such as the death of a loved one or during a period of war, problem-focused coping may be less adaptive and associated with negative post-stress reactions (e.g., Weisenberg, Schwarzwald, Waysman, Solomon, & Klingman, 1993). Under these conditions, particular types of emotion-focused coping strategies may be more effective.

Coping researchers categorize a wide variety of strategies as emotion-focused with some more efficacious than others (Carver, Scheier, & Weintraub, 1989; Frydenberg, 1997; McCrae & Costa, 1986). For example, positive reappraisal (e.g., "thought about the good things that might result"), suppression of competing activities (e.g., "I keep myself from getting distracted by other thoughts"), social support, and spirituality have been demonstrated to be effective emotion-focused stress reducers. Social support has been characterized as both problem focused -- for example, reaching out to others for instrumental reasons such as assistance or information; and emotion-focused -- that is, getting moral support, sympathy or understanding. Spirituality and religiosity have been characterized as a type of social support, and can be classified as either problem-focused in that they involve active pursuit (e.g., praying, attending worship services) as well as emotion-focused in that they make the person feel better. A number of studies have found positive impacts for individuals who use religious coping to deal with war, occupational

stress, personal or familial illness or bereavement (McCrae & Costa, 1986; see Pargament, 1997 for a review).

In more recent research Folkman and Lazarus (1988) suggested that the two broad categories of problem and emotion focused coping do not capture the complexity and range of coping responses from which individuals choose. They derived eight types of coping through factor analyses: confrontive, self-controlling, seeking social support, accepting responsibility, escape avoidance, planful problem solving, and positive reappraisal.

Substance use has also been identified as a coping strategy and in adolescence has been found to operate as a way of reducing negative affect or increasing positive affect. Wills (1986) found that adolescents who characteristically used emotion-focused strategies in response to negative affect were at greater risk for developing substance use problems, whereas adolescents who tended to rely on problem-focused coping strategies were less likely to use drugs or alcohol to cope with negative emotions.

Evidence suggests that children and adolescents develop a wide repertoire of coping strategies and that these strategies prove to be relatively stable over time (Boekaerts, 1996; Compas, 1987). Age and cognitive development affect coping strategies and their outcomes (Hauser & Bowlds, 1990). Adolescents are increasingly able to view situations from multiple perspectives which may increase their repertoire of coping strategies, their ability to appraise stressful events as threatening or challenging, and their understanding of the range of possible outcomes. Thus, adolescents may be more likely to use situationally effective forms of coping than younger children. Younger adolescents

tend to use more emotion-focused coping strategies such as wishful thinking, distancing, and denial than older adolescents (Stern & Zevon, 1990). The most stressful general concerns adolescents identify are issues regarding achievement and relationships (Compas, 1987).

A variety of studies support the view that there are distinct gender differences in coping strategies (Compas, Malcarne, & Fondacaro, 1988; Frydenberg, 1997; Patterson & McCubbin, 1987) although these differences are not universal and may vary as a function of the particular stressor. Adolescent girls were found to use more emotion-focused strategies than boys (Compas, et al., 1988) and engage more in ruminative coping (Nolen-Hoeksema, Parker, & Larson, 1994), and females of all ages tend to rely more on social support in dealing with a wide variety of stressors (Carver, et al., 1989; Frydenberg, 1997; Perosa & Perosa, 1993). High academic-achieving males and those with psychological symptomatology were more likely to utilize social and professional support when compared to non-clinical, average males (Frydenberg & Lewis, 1991). Folkman and Lazarus (1980) found that males were more likely to use problem-focused coping although more recent reports have found males and females to use problem-focused coping at similar rates (Frydenberg & Lewis, 1991; Hamilton & Fagot, 1988). Gender differences are apparent among adolescents coping with parental illness and may be related to the gender of the ill parent. For example, adolescent girls coping with maternal cancer had the highest number of psychiatric symptoms when compared to adolescent boys (Compas, et al., 1994).

The Role of Attachment in Coping

Attachment theory and research point to the attachment relationship as a means of organizing children's developing affect, cognition and behavior. Thus, as coping is a means of regulating negative affect in the face of adversity, internal working models may help determine the coping strategies individuals use in responding to stress (Crittenden, 1992; Kobak & Sceery, 1988). Bowlby (1969) hypothesized that a secure attachment enhances an individual's feeling of self efficacy and coping skills, thus a secure attachment can be considered an inner resource or protective factor in coping successfully with stress (Mikulincer & Florian, 1998). An insecure attachment on the other hand may be considered a liability or risk factor for coping with stress as the experiences of these individuals are characterized by less adaptive ways of regulating distress. A number of studies have examined the role of attachment in coping with stress. Crittenden (1992) examined the relationship between maltreated infants' methods of coping with maternal separation using the Strange Situation procedure and the type of maternal maltreatment they experienced. She found that coping style varied as a function of the type of maltreatment. For example, children who were physically abused coped with brief maternal separation by using avoidant or a combination of avoidant and ambivalent (A/C) patterns upon reunion. Crittenden hypothesized that these infants coped with their feelings of fear, anger, and rejection by being compliant and inhibited, strategies that proved adaptive in the short term since they increased the probability of a cooperative interaction while decreasing the possibility of an angry exchange.

Finnegan, Hodges, and Perry (1996) sought to evaluate the hypothesized relationship between the two types of insecure attachment styles and forms of childhood maladjustment. Previous research found (e.g., Arend, et al., 1979) that avoidantly attached children tend to view significant others as unavailable and are compulsively self-reliant. This type of attachment interferes with the development of empathy and age-appropriate emotional connectedness and may result in maladjustment that is externalizing in nature such as exploitation and aggressiveness. An anxious-ambivalent style on the other hand inhibits exploration away from the caregiver and interferes with the development of affect regulation and reliance on the self. The internal models of these ambivalent children posit the self as weak with a strong dependence on others and may be reflected in internalizing disorders such as depression. To test this hypothesis, Finnegan and colleagues examined school aged children's coping responses to hypothetical, everyday stressors such as expected and unexpected separations from their mother and dealing with difficult homework assignments. They employed a forced-choice method to evaluate ambivalent coping styles (for example, "would get worried that they would get separated again") and avoidant coping styles ("would soon get over being upset"). As expected, externalizing problems were predicted by the use of more avoidant rather than anxious-ambivalent coping skills. However, a clear gender difference emerged in children with internalizing disorders. While internalizing problems for boys were predicted from their greater use of anxious-ambivalent style coping skills, the same prediction could not be made for girls. As the authors note, a major drawback of this study is the assumption that their coping measure is a direct measure of children's internal working models. Finnegan and

colleagues suggest that future researchers in this area administer attachment scales as well as coping measures.

Kobak and Sceery (1988) examined the distribution of attachment patterns in college students and the way in which these patterns related to affect regulation and coping strategies during the students' freshman year. Affect regulation was measured by the way in which the students recalled distressing events with parents during childhood. Coping was measured by current perceptions of distress, self confidence in social and dating situations, and perceived relationships with family and friends as sources of emotional support using both self-report and peer report. Using the Adult Attachment Interview (AAI), Kobak and Sceery classified adolescents as Secure, Dismissing (corresponding to Avoidant), or Preoccupied (corresponding to Ambivalent). They found that adolescents classified as Secure were able to recall and integrate in a coherent manner distressing childhood experiences with parents who they represented as loving and available. Furthermore, adolescents in this group were best able to modulate negative feelings in problem solving and social contexts. The Dismissing group represented their relationship with parents and peers as less supportive than either the secures or preoccupieds and they had great difficulty recalling distressing events in childhood. Moreover, they were described by peers as more hostile than secures and preoccupieds and more lonely than the secures. Yet, the dismissing group's self-reported perceived social competence and distress did not differ from the secures. Kobak and Sceery viewed this lack of congruence between peer- and self-report as fitting Bowlby's (1973) characterization of the pseudo-self reliance of the avoidant style. Preoccupied adolescents

represented distressing events in a confused and incoherent way and although they recalled parents as loving, they also described a great deal of role reversal between parent and child. When compared to the dismissing and secure adolescents, the preoccupied adolescents had lower perceived competence, higher distress, and although they perceived peers and parents as supportive, Kobak and Sceery hypothesized that their ability to obtain support might be severely limited by their high levels of distress. Both the dismissing and preoccupied groups were, in general, more anxious than the secures, however, the Preoccupied group was more anxious than the Dismissing group.

Mikulincer, Florian, and Weller (1993) examined the relationship between attachment style and coping strategies of young Israeli adults during the Gulf War. Using Folkman and Lazarus'(1980) theory of the focus of coping, Mikulincer and colleagues identified four specific coping strategies: problem-focused, emotion-focused, support-seeking, and distancing. As predicted, securely attached individuals used more support-seeking strategies, ambivalently attached individuals relied on emotion-focused strategies, and avoidant individuals used more distancing strategies. However, all subjects used problem-focused coping strategies at a similar rate. Additionally, relative to the secures, ambivalent and avoidant persons experienced higher levels of distress as measured by the Brief Symptom Inventory. While ambivalents experienced high levels of anxiety, depression, hostility, and somaticization, the avoidants reported only increased hostility and somaticization. In a related study, Mikulincer and Florian (1995) found that the attachment styles of young adult, male and female, Israeli civilians predicted both the appraisal of, and their means of coping with, mandatory combat training. As predicted,

securely attached persons appraised the training as a challenge in contrast to the ambivalent and avoidant persons who viewed it as a threat. Furthermore, the securely attached trainees appraised themselves as better able to cope with the demands of the training than their ambivalent peers. With respect to coping strategies, secure and ambivalent persons used more support-seeking than avoidant trainees; ambivalent persons reported more emotion-focused strategies than the secures and avoidants; and the avoidants used more distancing coping than the ambivalents and secures.

Birnbaum and colleagues (1997) examined the association between attachment style and mental health in divorcing individuals. They hypothesized that attachment style would predict the way individuals appraised and coped with the process of divorce which in turn would affect their level of distress. Specifically, they predicted that securely attached individuals, in contrast to those rated as ambivalent, would appraise the divorce as less threatening; use more problem as opposed to emotion-focused coping skills; report less distress; and seek social support. Similar to the secures, avoidants would appraise the divorce in a less threatening manner and report less distress, however, they would use less social support and more distancing types of coping in comparison to the secures and ambivalents. While Birnbaum and colleagues found that the secures felt that the divorce was only slightly threatening and rated themselves as able to cope with it, they did not use problem-focused coping skills to a greater degree than their insecure peers, prompting the researchers to hypothesize that since they did not appraise the divorce process as threatening, they did not need to exert much energy in coping. The ambivalents appraised the divorce as a threat and themselves as unable to deal with it; they demonstrated greater

use of emotion-focused coping strategies; and experienced higher levels of distress, however, they were more socially withdrawn. Avoidants showed a more complex picture. In regard to appraisal, they rated the process of divorce as a threat yet they rated themselves as having the ability to cope with this threat. However, despite the avoidants' sense of control and mastery, they reported ineffective coping strategies by the increased use of emotion-focused coping, including social withdrawal, and high levels of distress similar to the ambivalents.

The findings above demonstrate that individuals with different attachment styles use different coping strategies to deal with stress. The strongest findings point to the effective and adaptive coping strategies used by securely attached individuals who tend to rely on others in an effective manner and can generate and act on possible solutions to problems they face. The research also points to the ability of secure individuals to be flexible in their use of strategies depending upon how they appraise the stressor. The coping strategies used by insecurely attached individuals are more complex. In general, individuals with a more anxious attachment style see others as supportive and may use support-seeking strategies but their inability to repress negative emotions prevents them from focusing on the problem and encourages more emotion-focused, passive, and ruminative strategies. Avoidantly attached individuals appear to use distancing strategies to a greater extent, but the relation between the use of these strategies and their level of distress is unclear. First year college students classified as dismissing were less likely to report symptoms of distress than similarly classified divorcing adults or young adults under the threat of war. It may be that during more normative stressors (e.g., first year of

college), the defensive avoidance of dismissing individuals remains intact, but in the face of a more threatening stressor (e.g., war or the loss of an attachment figure), this pseudo-self reliance breaks down and they are unable to contain negative emotions.

Bereavement

The terms *bereavement, mourning, grief,* and *grieving,* often used interchangeably, have been defined in various ways. *Bereavement* usually refers to the state or condition caused by loss by death (Attig, 1996) and is often used as an umbrella term to refer to grief and mourning (Osterweis, Solomon, & Green, 1984). Attig (1996) uses the terms *grieving* and *mourning* to refer to the process of accommodating the loss. Mourning, according to Attig, refers to bereaved individuals' internal process of transforming their relationship with the deceased. Grief is a specific emotion often elicited in response to loss whereas grieving, Attig contends, is a coping process and part of this process is coming to terms with the emotion, grief. Lindemann (1944), an early bereavement researcher, coined the phrase "grief work" to describe the process of confronting the loss, reviewing the events before and after the death, and focusing on memories of the deceased in an effort to come to terms with the loss.

Bereavement and the Development of Attachment Theory

Bowlby's (1969) development of attachment theory, with its emphasis on the initial mother-child relationship, grew out of his keen observations of the marked similarities between children's reactions to separation from their mothers and the reactions of adults to the death of their spouses. As a post-World War II consultant to the World Heath Organization, Bowlby examined orphaned and homeless children and later, in

collaboration with Robertson (Bowlby, Roberston, & Rosenbluth, 1952), observed the reactions of children separated from their mothers during hospitalization. In collaboration with Colin Murray Parkes, with whom he studied bereavement reactions in adult widows, Bowlby (1980) observed that the children and the adults exhibited similar patterns of response to loss, with comparable behavioral manifestations that proceeded in stages.

Weiss (1993) divides relationships into two different classes: relationships of community, such as friendships, and relationships of attachment, such as parent-child or spousal relationships. While the loss of a close friend triggers sadness and depression, the loss of an attachment figure evokes a prolonged and severe response. Relationships of attachment foster inner security and the loss of the attachment figure is a life threatening disruption of that security and for children especially, disrupts the sense of physical safety. The compulsiveness and urgency of searching for the deceased that Bowlby observed in the mourning widows and children he studied are essentially attachment behaviors that have been activated, and then frustrated, by the loss. Even among those who had insecure attachment relationships with the deceased (i.e., avoidant, ambivalent or fearful/disorganized), the severity of this bereavement response is not diminished and may even be exacerbated.

The first stage of the mourning process observed by Bowlby (1980) is characterized by numbness, shock, and disbelief which is often punctuated with intense anger and distress. The second phase involves searching and yearning characterized by intense emotional pain including tearful sobbing and pining for the deceased. This phase is also accompanied by feelings of anger aroused by the circumstances of the death and the

frustration of the "fruitless search" for the deceased as well as feelings of sadness as the bereaved begins to recognize that the individual is gone. The third phase, disorganization and despair, describes the bereaved's world as turned upside down by the loss and a feeling that living in a world in which the deceased does not exist is not possible. It is in this phase that the bereaved begins to despair and gives up the futile search. The bereaved's task at this juncture is to go on to the fourth stage which entails reorganization or, in Attig's (1996) terms, "relearning the world" (p. 11) without the deceased in it. This is a period of relative calm, punctuated by alternating periods of denial of separation, disorganization and reorienting. In the normal course of adult mourning this final phase gives way to relinquishing attachment to the deceased and a reorientation toward new relationships.

Since Bowlby's initial observations, many researchers in the area of bereavement have conceptualized the bereavement process in similar stages (Engel, 1964; Kubler-Ross, 1969; Lindemann, 1944; Rando, 1984) which share four essential commonalities: avoidance, confrontation, reestablishment, and detachment from the deceased. Bowlby noted that healthy mourning for both children and adults entails progressing through these stages. Researchers and clinicians warn however, that these stages of grieving vary from person to person and are overlapping and fluid (Shuchter & Zisook, 1993). Moreover, the idea that healthy mourning requires severing emotional bonds with the deceased in order to make new attachments has recently been challenged (Silverman & Klass, 1996). A body of research has evolved demonstrating that even in the absence of pathological symptoms, mourners maintain an ongoing relationship with the deceased and can make new

relationships while maintaining this bond. In their study on children's bereavement reactions, Worden and Silverman (1996) observed that both children and adolescents maintained a connection to their deceased parent in the absence of any psychiatric symptoms. This ongoing relationship has been observed in college women who lost a parent to death (Silverman, 1987; Tyson-Rawson, 1996) and adolescents bereaved from the loss of their sibling (Hogan & DeSantis, 1996).

There is little agreement as to the course of time of normal grief and bereavement since a wide variety of factors affect the duration. These factors include unanticipated loss, the nature of the relationship with the deceased prior to death, gender of the bereaved, the nature of the death, and prior psychological functioning of the bereaved (Weiss, 1987). In their longitudinal study of young widows and widowers, Stroebe and Stroebe (1993) found that two years after the death, two thirds of their sample ($\underline{n}$ = 60) no longer exhibited depressive and somatic symptoms. In a small study of parentally bereaved adolescents, Harris (1991) found that for all them, subjective distress decreased significantly thirteen months after the death. However, when compared to parentally bereaved adults, many adolescents continued to report a slightly higher degree of distress. After reviewing several longitudinal studies, the majority of which involved adults, Stroebe and Stroebe (1993) tentatively concluded that the normal course of bereavement lasts one to two years following the death.

A healthy mourning response results in accommodation to the loss, although little agreement exists in the bereavement literature as to what accommodation or recovery from bereavement entails and moreover, what effective recovery means. Weiss (1993)

argues that, at the very least, recovery entails a return to the previous level of psychosocial functioning. According to Weiss, effective recovery also entails the ability to invest energy in the present; freedom from disturbing thoughts and feelings about the deceased; the ability to feel pleasure about the self, others, and in activities; a sense of hopefulness regarding the future; and the ability to maintain emotionally significant relationships as well as invest in new relationships. Failure to recover in any one of these respects may constitute a pathological bereavement response and result in impaired social relationships, impaired vocational or school functioning, depression, anxiety, or other forms of psychopathology.

Bowlby's (1973) observations of children's reactions to loss were at odds with the prevailing psychoanalytic theory which posited that until adolescence, children do not have the ability to mourn since they have not achieved true object constancy. Bowlby demonstrated that children as young as two had the ability to mourn. Children share with adults many of the same tasks of grieving, including coping with grief, accepting the reality and finality of the death, commemorating the death, and investing emotional energy into other relationships (Silverman & Worden, 1992). Childhood grieving differs, however, from adult grieving in that children's grief seems to be only intermittently evident (Rando, 1984). Elizur and Kaffman (1982) note that parentally bereaved children express sadness, anger, and longing while also using various defense mechanisms, particularly denial and avoidance, in an effort to distance themselves from the reality of the loss. The interplay of denial and avoidance assists children in accepting the death and making sense of the world without the deceased in it.

Bowlby (1980), as well as more recent bereavement researchers, observed pre- and post-death environmental and social conditions that were conducive to a healthy mourning response. Favorable conditions for children and adults include having a reliable adult available for support such as a surviving parent. Furman (1983) believes that children can master their bereavement with appropriate help from the surviving parent or parent substitute. In addition to helping children understand the irrevocability of death, caregivers must address children's preoccupation with their own vulnerability: "Who will take care of me?" and "Will I die too?" are the main (although usually unvoiced) concerns of parentally bereaved children. Reducing the ensuing stressors -- for example, avoiding moving or changing schools -- and ensuring the consistency and availability of the surviving parent or parent substitute can also assist children in mastering their bereavement.

Bowlby cautioned, however, that children are extremely vulnerable, and that the provision of an environment conducive to healthy mourning is very difficult and may be more the exception than the rule. Furman (1983) notes, for example, that adults' inability to explain the concrete reality of the irrevocability of death (e.g., "Mommy went to sleep") may contribute to children's misunderstanding which in turn does not allow for a full expression of the child's feelings. Under such unfavorable conditions, Bowlby observed a variety of psychiatric symptoms in parentally bereaved children including persisting anxiety, a desire to die in the hope of a reunion with the parent, self-blame and guilt, hyperactivity and aggressivity, compulsive caregiving of others, compulsive self-reliance, and depersonalization. Bowlby concluded that, with few exceptions occurring under the most optimal conditions, parental death in childhood resulted in usually anxious

attachment or extreme self-sufficiency. Bowlby's observations of children and his examination of the bereavement histories of adults led him to conclude that parental death in childhood or adolescence puts youths at a high risk of developing psychiatric disorders.

A number of other researchers have examined the role of childhood parental death in later depression (e.g., Brown, Harris, & Bilfulco, 1986; Tennant, Bebbington, & Hurry, 1981), and severe psychopathology such as schizophrenia (Watt & Nicholi, 1979). In a comprehensive examination of the literature on parentally bereaved children, Berlinsky and Biller (1982) found that the largest number of studies dealt with psychiatric symptomatology with depression as the most frequently studied topic. They concluded that the extent to which bereaved children exhibit psychiatric symptoms in childhood or in later adulthood at a higher rate than nonbereaved children has not been adequately studied. Berlinsky and Biller found that the majority of the studies in their review suffered from severe methodological problems with the lack of control groups and small sample numbers as the most glaring problems.

In the final book of his trilogy Attachment and Loss, Bowlby (1980) relaxed his earlier conclusion and observed that familial conditions following parental death were a determining factor in the child's outcome. More recently, several authors have concluded that the death of a parent is more accurately viewed, not as a single stressful event, but as a series of events occurring before and after the death (Berlinsky & Biller, 1982; Brown, et al., 1986; Silverman & Worden, 1992). Silverman & Worden argue that the accumulation of the pre- and post-death events together with the death itself are significant for child outcomes. These contributing factors include the response of the

surviving parent to the bereaved child; the availability of social support; the extent to which daily routines, financial status, residence, and school changed after the death; and opportunities to ask questions and talk about the deceased parent.

Adolescent Bereavement

Parental death may have significant negative implications for adolescent development but until recently, little empirical research has considered adolescence as a distinct phase of life when examining bereavement reactions. Most of what knowledge there is comes from studies of both children and adolescents or from adult studies that included some late adolescents. Clark, Pynoos, & Goebel (1996) suggest that the relatively low number of adolescents bereaved by any significant death is the primary reason for the paucity of studies in this area. A second reason may be that in the United States today, researchers generally subdivide adolescence into three stages: early adolescence (10 to 14 years); middle adolescence (15-17) and late adolescence (18-mid-twenties) (Elliott & Feldman, 1990); and less often study adolescents as a single group.

Research to date on parentally bereaved adolescents has examined the process of adolescent grief and mourning, the incidence of depression in bereaved adolescents, the role the loss of a parent plays in the negotiation of relationships, the impact of parental death on adolescents' world view, as well as some positive aspects of bereavement such as increased maturity and self-reliance.

Meshot and Leitner (1993) used the Expanded Texas Grief Inventory (ETGI) to examine the bereavement responses of 20 college students who lost their parents during their early or middle adolescent years. The ETGI is a self report inventory which examines

present feelings about the deceased. When compared to the norming group of bereaved adults, adolescents reported dwelling more on the death and continued to feel a greater sense of disbelief about the loss several years after the death. Adolescents also reported more sleep disturbance, irritability, anger at the parent who died, and in general, a greater difficulty relating to others since the death.

Gray (1987) examined the responses of 50 young people who were between the ages of 12 and 19 when their parents died. He found that overall, 6 months to five years after the death, these adolescents evidenced more depressive symptoms as measured by the Beck Depression Inventory than adolescent community samples. Two factors contributed strongly to the level of depressive symptoms exhibited: the availability of informal social support from family and friends, and personality style as measured by the Differential Diagnostic Technique (DDT). The DDT rates personality on a continuum between passive/dependent and aggressive/independent ways of relating with balanced being somewhere between the two extremes. Parentally-bereaved adolescents with a passive/dependent style and high informal support evidenced less depression than those with a similar personality style but lower social support. However, those adolescents with balanced personalities and low social support were significantly less depressed than their passive/dependent peers who also reported low social support. In other words, adolescents with balanced personalities were more self reliant even in the face of a poor network of social support.

Hepworth, Ryder, and Dreyer (1984) examined the effect of recent parental death (after age 16) on intimate relationships in college students. Comparing parentally bereaved

students with two other groups -- students whose parents were divorced and those with no parental disruption -- Hepworth and colleagues found that the bereaved students tended to move into intimate relationships either more quickly or more slowly than students in the two other groups, with avoidance of relationships as the more common pattern.

A number of studies have examined how the death of a parent changes adolescents' view of the world. Schwartzberg and Janoff-Bulman (1991) explored the impact of parental death on college students' fundamental assumptions about themselves and their world. Janoff-Bulman (1992) has argued that traumatic events can shatter an individual's fundamental assumptions about the general benevolence of the world (the belief that people are generally good), the meaningfulness of the world (that life events are not random but can be controlled by engaging in proper behaviors), and their intrinsic self-worth (the belief that they are good and worthy). While a small number of bereaved students reported that they felt that the world was no longer safe and that they had became more somber, serious, and cynical since the death, overall, the bereaved did not significantly differ from their non-bereaved peers in their assumptions about the benevolence of the world or their own self-worth. However, Schwartzberg and Janoff-Bulman did find that the death disrupted the bereaved students' belief in the meaningfulness of the world in that they had a greater belief in personal events being determined by chance rather than under their control. Tyson-Rawson (1996) and Silverman (1987) found similar reactions in their studies of paternally bereaved college women. While the women felt more vulnerable, their revised perception of the randomness

of the world catalyzed an acceleration toward maturity, which for the most part was viewed by the women as a positive outcome of their experience. Other positive outcomes of bereavement such as finding a meaning for the death, developing a greater appreciation of life, strengthening of emotional bonds with loved ones, and increased self-reliance have been reported (Edmonds & Hooker, 1992; Oltjenbruns, 1991) and may be linked with fewer symptoms of distress (Schwartzberg & Janoff-Bulman, 1991).

The Grant Foundation Adolescent Bereavement Consortium, a group of bereavement researchers, has identified a list of related but independent variables thought to influence the quality and magnitude of reactions among parentally bereaved adolescents (Clark, et al., 1996). The list includes: the age of the adolescent at death of parent, the gender of the adolescent and the deceased parent, the cause of the parent's death, the forseeability of the death and degree of individual or familial preparation, the way the surviving parent responds to the adolescent, subsequent life circumstances, continuity or lack of continuity in the adolescent's daily life after the death, the availability of social support, the adolescent's prior history of psychopathology, and the family's history of psychopathology.

Parental Death from AIDS

It is estimated that approximately 80,000 children and adolescents have lost one or both parents to complications from HIV/AIDS with the majority of these children living in the New York City area (Michaels & Levine, 1992).

HIV/AIDS disproportionally affects poor, African-American and Hispanic adults and children. In New York City, more than 80% of youths orphaned by AIDS are African-

American or Hispanic (Michaels & Levine, 1992). The term *orphan* has been used to describe these children since the majority of them are children of unmarried women who, prior to their deaths, were the children's sole supporting parent. As Michaels and Levine note, youths orphaned by AIDS are "situated in a stormy sea of violence, homelessness, drug and alcohol use, poverty, discrimination, and community disintegration" (p. 4). The largest number of children and adolescents affected by AIDS are those whose parents acquired the virus either by sexual intercourse with an HIV infected partner or by sharing infected needles. The vast majority of these youths are not HIV infected and are thus expected to have life spans equal to their peers.

As childhood and adolescent bereavement researchers have noted, the short- and long-term outcomes for parentally bereaved children are affected by both the death and the pre- and post-death circumstances and events. While youths bereaved by AIDS are affected by the individual and familial factors common to all parentally bereaved children, they face additional stressors which may place them at greater risk for poor outcomes. Adolescents from poor, substance-abusing families are more likely to have lived with significant multiple stressors such as an ongoing or intermittent lack of basic needs (i.e, food, clothing, shelter) and episodic placement with relatives or foster families (Armisted & Forehand, 1995; Zayas & Romano, 1994).

People with HIV/AIDS continue to be stigmatized by society at large, by members of the very communities which are greatly affected by the disease (Dalton, 1989), and in some cases by immediate and distant family members. Moreover, persons with AIDS may unconsciously take on this stigma as part of their identity (Nagler, Adnopoz, & Forsyth,

1995). People diagnosed with HIV/AIDS often keep this diagnosis a secret from outsiders, family members, and friends because of fear of losing housing, being fired from a job, being taunted or shunned by neighbors, or rejected by family and friends.

HIV infected parents face difficult decisions regarding disclosing their HIV status to their children and this decision is often based on both parental and child factors (Rotheram-Borus, Draimin, Reid, & Murphy, 1997). Parental factors include the extent of the progression of the disease, the presence of denial, culture, and issues relating to planning for the future. When deciding whether to share this information with their children, parents' considerations include the age of the children, the parents' perception that the children may not understand or be able to cope with the information, reluctance to ask the children to keep a secret, and fear that children may inform others of this family secret. Parents are also afraid that their children will be stigmatized and rejected by others. It is estimated that approximately 75% of parents choose to disclose their HIV status to their adolescent children but tend to withhold this information from younger children (Rotheram-Borus, et al., 1997). It is unclear whether or to what extent this pre-death disclosure affects the teens' bereavement process or later psychosocial functioning. Furthermore, even in the absence of formal disclosure, anecdotal reports indicate that adolescents especially often find out their parents' diagnosis through other means and may collude with the parents' desire for secrecy. Adolescents may also suspect or intuit that their parents are living with HIV as they witness their parents' high level of symptomatology, impaired quality of life, and multiple hospitalizations and compare these

symptoms with those of neighbors or other family members whose HIV status they are aware of.

While HIV infected mothers tend to make custody arrangements for their younger children, they are less likely to make any arrangements for adolescent children (Rotheram-Borus, et al., 1997). When a plan has been made for adolescent children, the viability of the plan depends on a number of factors including whether the adolescent's wishes were taken into account, a desire on the part of the adolescent to be independent, as well as the substitute caregiver's ability to parent a teen who may be exhibiting problematic behaviors. In other cases, parents may request that their adolescent assume parenting duties for younger siblings which the teen may be ill-equipped to handle (Zayas & Romano, 1994). After the death of a parent, youths may continue to carry the secret in an effort to protect the parent's memory and wishes as well as protecting themselves from possible stigma. In some cases, youths are not told the real reason for their parents' premature death until long after the parent has died.

Anticipatory grief is common among family members of terminally ill patients (Rando, 1984) and has been identified in youths living with HIV infected parents (Draimin, 1993). Stages of anticipatory grief relatively similar to post death grief reactions have been delineated in youths anticipating parental death (Rosenheim & Reicher, 1986) While anticipatory grief may assist mourners in preparing for the loss and has been associated with a decrease in pathological bereavement reactions, deleterious effects have also been identified such as premature emotional detachment from the dying family

member prior to the death or an increase in hostility toward the dying family member. (Rando, 1984).

The Effects of AIDS-Related Parental Death On Attachment Style

The impact of the death of a parent from AIDS must be considered against the backdrop of persistent poverty, substance abuse, stigmatized illness, and community violence. While adolescents whose parents are living with AIDS are considered a group at high risk for current and future psychosocial and behavioral problems, recent investigations suggest that on social, mental health, and behavioral indices they are functioning at a level consistent with their peers from similar socioeconomic and ethnic backgrounds (Gwadz, Rotheram-Borus, Franzke, Moore, & Litke, 1998). Investigations into the impact of stressful life events reveal that patterns of basic beliefs about self, others and the world differ between individuals who experienced traumatizing events and those who did not (Catlin & Epstein, 1992; Janoff-Bulman,1992). Individuals who have not suffered significant negative life events tend to hold fundamental assumptions of generally positive self worth and the benevolence of the world. In contrast, those who have experienced childhood rejection, abuse, or violent crime may be inclined to believe the world to be less meaningful and benevolent, place less value on relationships, and generally believe themselves less worthy.

Early research with economically disadvantaged toddlers and preschoolers suggests that attachment patterns may be less stable in this population (Thompson, et al., 1983; Vaughn, et al., 1979) and compared to middle class adolescents, low-SES adolescents tend to have a far greater number of unresolved attachment traumas, or hold

views of others as unreliable, and display a pseudo-reliance on the self (van IJzendoorn & Bakermans-Kranenburg, 1996). In addition, parental chronic illness has been associated with an avoidant attachment style (Feeney & Ryan, 1994). Thus, the impact of AIDS-related parental bereavement on low-SES adolescents' internal working models is difficult to predict. On the one hand, while a secure attachment with the deceased parent, an effective support system following the death, and continued life stability have been found to mitigate the negative impact of parental death in middle class adolescents (Tyson-Rawson, 1996), this loss may have a more traumatizing effect on economically disadvantaged adolescents from families with AIDS who have been dealing with a terminally ill parent, have developed insecure patterns of attachment, poor networks of support, and significant instability. On the other hand, while the process of bereavement is generally understood to entail abandoning long-held assumptions of self and identity (Parkes, 1972), parental death from AIDS may not have a pronounced negative effect on the internal working models of adolescents who may already hold negative expectations about the availability of others and the meaningfulness of the world. Moreover, the same mechanism that explains findings that parental death for middle class adolescents accelerates maturity may serve to increase the pseudo-self reliance in some adolescents bereaved by parental AIDS. In other words, parental death from AIDS may have a minimal effect on adolescents' internal working models which are characterized by negative views of self and others and may in fact exacerbate the distancing, avoidant methods of coping that are the hallmarks of the dismissing style and exacerbate the enduring, high levels of negative affect characteristic of preoccupied adolescents .

The Present Study

At its core, attachment theory provides a framework for explaining the variations in human responses to stress. In examining children's responses to parental separation and death, Bowlby proposed an internal, representational life-long system of organizing relational experiences and handling distress. Coping strategies are those efforts individuals use to manage the negative affect associated with stressful life events. Thus, attachment styles are theorized as shaping and organizing the variety of coping strategies individuals use to deal with stressful events. The present study sought to evaluate the relations among coping strategies, attachment style, and mental health symptomatology in adolescents dealing with chronically ill or deceased parents as a result of HIV/AIDS. While several studies have examined the relationship between coping, attachment and mental health, no study to date has extensively examined these concepts in the context of threatened or actual parental death in adolescence. Moreover, the study sought to contribute to the sparse data in the attachment literature on the attachment styles of economically disadvantaged adolescents.

In addition, while previous studies have examined attachment style and coping, most of these investigations have been limited by their reliance on measures which assess three (secure, avoidant, ambivalent) rather than four styles of attachment, leaving out individuals who might be classified as fearful. The inclusion of this category is important to delineate the two distinct forms of being avoidant, one in which individuals deny distress and downplay attachment needs (dismissing) and the other in which individuals readily report distress and anticipate rejection from others (Bartholomew, 1990). Further,

in light of recent reports that have demonstrated the efficacy of measuring attachment as a continuous rather than a categorical variable (Bartholomew & Shaver, 1998; Brennan, et al., 1998), this study scored attachment as both a continuous and categorical variable.

As Bowlby (1973) observed, attachment related behaviors are activated in the face of separation or threatened separation. Subsequent theorists postulate that significant life experiences affect the stability of attachment patterns established in early childhood (e.g., Waters, et al., 1995). Thus, this study also examines the impact of parental death on attachment status, and the impact of attachment status on grief in the aftermath of death. A secure attachment should assist the bereaved, after a period of mourning, to successfully tolerate the loss since this distress is buffered by inner resources and a confidence in the availability of others to obtain additional support. In contrast, dismissing adolescents, who rely on distancing and pseudo-self reliance in dealing with loss, will continue this pattern of avoidance. While these individuals report that they have the inner resources to cope, the severity of the premature loss of their primary attachment figure may shatter their defenses and lead to a flood of negative feelings which they may find difficult to repress. Preoccupied adolescents will remain overwhelmed with the threatened or actual death, limiting their ability to effectively cope as the loss further compounds their fragile sense of self and their insecurity in the availability of others to provide support. Those with fearful attachment styles may exhibit a combination of the strategies used by preoccupied and dismissing adolescents and exhibit high levels of distress. Adolescents orphaned by AIDS must also cope with the aftermath of life without parents which may include new caregivers, new home and school environments, responsibility for younger siblings, or

premature independence. In short, these adolescents are forced to cope with major stressors over and above the death of their parent.

This study examined the effect attachment style has on the coping strategies of adolescents dealing with anticipated and actual parental death using the following hypotheses:

Hypotheses

1. Current attachment style (dimensional or categorical) will predict the coping strategies used by adolescents of HIV positive parents after controlling for demographic characteristics (age, gender, ethnicity), experiences relevant to attachment (disruption in primary caregiving, death of parent) and baseline parental bonding.

2. Current attachment style (dimensional or categorical) will predict the level of distress in adolescents of HIV positive parents after controlling for demographic characteristics (age, gender, ethnicity) experiences relative to attachment (disruption in primary caregiving, death of parent) and baseline bonding.

Specifically,

3. Securely attached adolescents will report more adaptive coping strategies (i.e., Positive Action, Social Support, and Spiritual Hope) and fewer mental health symptoms than insecurely attached adolescents.

4. Preoccupied adolescents will report more emotion-focused (i.e., Passive Problem Solving, Depression/Withdrawal), and help seeking (i.e., Social Support, Spiritual Hope) coping strategies and more mental health symptoms than adolescents who evidence a secure or dismissing style of attachment.

5. Dismissing adolescents will report more distancing (i.e., Self-Destructive Escape, Detachment) coping strategies than secures and preoccupieds and will report more mental health symptoms than secures but fewer mental health symptoms than preoccupied adolescents.

6. The coping strategies and level of mental distress for adolescents who evidence a fearful attachment style will be explored.

7. The differences between bereaved adolescents who view their current caretaking situation as supportive and those who view their current situation as less supportive will be explored.

CHAPTER II

METHOD

Participants

Relation to the Larger Study

Participants came from a larger project which is evaluating the efficacy of a cognitive-behavioral group intervention for parents living with AIDS and their adolescent children to reduce negative outcomes for youth. The primary outcomes being evaluated are the adolescents' mental health, behaviors (sexual and substance abuse risk acts, school performance and attendance, and delinquency), and social adjustment. Parents were originally recruited from the New York City Human Resources Administration Division of AIDS Services (DAS) which provides comprehensive case management services to individuals with AIDS or advanced HIV disease who qualify for public assistance. Parents were selected between August 1993 and March 1995 from a consecutive series of DAS clients. Six hundred sixteen subjects met the following selection criteria: HIV positive parent of at least one adolescent child between the ages of 12 and 18 who was not known to be HIV infected and a speaker of English or Spanish. Of those 616 subjects who met selection criteria, 119 died during the recruitment period leaving 497 parents. Eighty-nine (17.9%) refused participation and 101 (20%) were untraceable resulting in voluntary informed consent from 307 parents. Only one parent from each family was selected for inclusion. At the time of recruitment, families were randomized into the intervention condition or the control condition and parents gave consent for recruitment of their adolescent children (Appendix K). These 307 parents had 507 adolescents eligible for

recruitment and 415 (81.9%) were given baseline interviews at the time of parental recruitment, or at a later date.[1] Informed consent was obtained from the adolescents (Appendix L) and the study was approved by the UCLA Human Subjects Protection Committee (Appendix M).

Eighty percent of parents were mothers and 20% were fathers. Parents were a mean age of 39 years (SD = 4.85) and had an average of 2.6 children. Forty-five percent of the parents were Latino (Puerto Rican and Dominican), 34% were African American, 11% were Caucasian and 10% were of other ethnicities. At recruitment, adolescents were a mean age of 14.8 (SD = 2.12).

Adolescents in the Present Study

Of the 415 adolescents who were given baseline assessments, 274 who received follow up assessments between November 1998 and March 2000 were given additional measures for the present study. Approximately 30 sibling groups were represented among these 274 adolescents, ranging from two to five children in a family. In order to eliminate shared environment effects, one adolescent was chosen from each family at random, resulting in the 196 adolescents who were participants in the study reported here.

An examination of key demographic variables (age, gender, ethnicity) revealed that this subsample did not significantly differ from the larger sample.

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[1]Some adolescents were given baseline interviews at a later date because: a) they initially refused to participate in the study despite parental consent, b) their parents initially refused their participation in the study but later consented or, c) they aged into the study after parental recruitment.

Table 1 presents the frequency distributions of selected background characteristics. The adolescents ranged in age from 15 to 24 with a mean age of 19.5. There were slightly more females (58.7%) than males (41.3%), however, males and females did not differ significantly in age, t (194) = .62, p = .53. The majority of the participants were non-black Hispanic (51%) or African-American (35.7%). Most participants were involved in the larger project for over 4 years as the modal follow-up period was 60 months (range 6 to 66 months). Approximately half of the adolescents were in the treatment condition and participants did not differ on key demographic variables (age, gender, ethnicity) by treatment condition.

Approximately 58% of adolescents were parentally bereaved having lost one or both parents. The mean time that had elapsed since the death of the parent in the larger study was 4 years (SD = 2.6; range: 1 month to 12 years) and 9 years (SD = 5.6; range: 1 to 22 years) since the death of the non-study parent. Approximately 14% of the adolescents had lost both parents, 20% their mother only, and 24% their father only.

In order to obtain information about early childhood disruptions in care, a questionnaire was created which asks about past and current caregivers starting with birth up to the present (Appendix A). Caregiver is defined as an "adult who had (or has) primary responsibility for you" and meets at least two of the following characteristics: "(a) lived with you, (b) set rules and disciplined you, (c) had the authority to make major decisions about your life, and (d) significantly contributed financially to raising you." For each caregiver named, adolescents were also asked at what ages and the number of years

Table 1

Frequency Distribution of Selected Background Characteristics of Adolescents with HIV-infected Parents

Variable	N	%
Gender		
Male	81	41.3
Female	115	58.7
Ethnicity		
Hispanic	100	51.0
African-American	70	35.7
Asian	5	2.6
White	4	2.0
Other	13	6.6
None	4	2.0
Condition		
Control	100	51.0
Intervention	96	49.0
Parental Death		
Yes (one or both)	113	57.7
(Mother only)	(40)	(20.4)
(Father only)	(46)	(23.5)
(Both)	(27)	(13.8)
No	83	42.3
Primary Caregiver (during 1st 5/6 years of life)		
Mother	177	90.3
Grandmother	10	5.1
Father	4	2.0
Other relative	5	2.5
Disruption in relationship with Primary Caregiver during first 11 years of life		
Yes	51	26.0
No	145	74.0
Follow-up Period since baseline interview (in months)		
6 - 30	7	3.5
36	16	8.2
42	19	9.7
48	17	8.7
54	38	19.4
60	73	37.2
66	26	13.3

they considered the named caregiver meeting the above criteria. In addition, subjects were asked to name one person whom they considered their main caregiver growing up.

Participants named a large number of related and unrelated adults who provided varying degrees of care to them at various points during their lives. The primary caregiver was defined as one caregiver listed on the grid with whom the adolescent had lived continuously five out of their first six years of life. If no caregiver met this criterion, the primary caregiver was defined as the person named as their main caregiver growing up. For 90% of adolescents, the primary caregiver was their mother, for 5% grandmother, 2% father and the final 3% foster parent, aunt, or grandfather. An occurrence of disruption in care then was defined as one or more years (up to and including age 11) when care was not provided by the individual previously defined as primary caregiver. The cut-off age of 11 was chosen since this was the minimum age of recruitment into the study. A simple dichotomy was created comparing those who had one or more disruptions and those who had none (0 = none, 1 = one or more). Twenty-six percent of participants met the criteria for disruption in care. When the data were examined by early disruption (before age 5) and late disruption (between age 6 and 11), 7% had experienced early disruption while 23% experienced later disruption. Overall, more females than males experienced disruption with their earliest primary caregiver ($\chi^2(1, \underline{N} = 196) = 7.13, \underline{p} < .01$).

Procedures

As part of their involvement in the larger study, adolescents are administered a baseline interview assessing mental health, behavior, and social adjustment. Follow up interviews, which take between 1 and 1 ½ hours to complete, are conducted every three

months for the first two years of enrollment in the study and every six months thereafter. Adolescents are paid $25 for each interview. Interviewers receive four to six weeks of training which covers interviewing techniques, confidentiality, ethics, child abuse, emergency protocols, and issues related to HIV/AIDS. Interviewers participated in mock interviews, were observed by a supervisor, and met established criteria for successful interviewing prior to conducting interviews in the field. Sixty-two percent of interviewers are Black or Hispanic. All interviews are audiotaped and monitored for quality assurance. All items are read to participants and data is collected on laptop computers and on paper. All assessments are conducted in English.

Data for the study presented here were collected at three points in time by the trained interviewers. The Parker Parental Bonding Instrument (PBI) was originally administered to all participants at their baseline assessment. Attachment instruments and caregiving history were administered as part of a separate supplemental data collection by the larger study. All other instruments (Coping, Mental Health, Grief, Current PBI) were administered to participants during a regularly scheduled follow-up assessment. The mean time between baseline and follow-up was approximate 54 months (SD = 10.7, range 6-66). The follow-up interviews that were selected for inclusion in the present study were administered on the same day as the attachment instruments or up to six months later (M = 3.39 months, SD = 2.08).

Measures

Independent Variables

Attachment Measures

The Multi-Item Measure of Adult Romantic Attachment (Brennan, et al., 1998; Appendix B) was used to measure current attachment style as it is derived from most of the extant self-report measures of adult attachment and captures the two dimensions of attachment that underlie virtually all of these existing measures. The scale was modified by changing "romantic partner" to "close other" to capture attachment style in adolescents who may have had little experience with romantic relationships. This 36 item questionnaire uses a 7 point Likert scale derived from 14 adult and adolescent attachment scales, some that ask about romantic relationships and others that ask about close others (e.g., "I prefer not to show close others how I feel deep down"; " I worry about being alone"). The questionnaire yields two major factors: Anxiety and Avoidance, which accounted for 62.8% of the variance in the sixty attachment constructs measured. The instrument yields a score based on the two dimensions of Anxiety (alpha=.91) and Avoidance (alpha = .94), as well as categorizing individuals into one of four adult attachment categories in a manner that is conceptually equivalent to the horizontal and vertical axes of Bartholomew's (1990) self-classification measure: secure (low Anxiety, low Avoidance); preoccupied (low Avoidance, high Anxiety); dismissing (high Avoidance, low Anxiety); and fearful (high Avoidance, high Anxiety).

The avoidance and anxiety factors correlate highly with other attachment scales measuring avoidance and anxiety respectively. For example, avoidance was significantly

related to Rothbard, Roberts, Leonard, and Eiden's (1993) Avoidance of Intimacy factor (r = .91); Feeney, Noller and Hanrahan's (1994) Discomfort with Closeness factor (r = .90); and West and Sheldon-Keller's (1994) Self-Reliance factor (r = .88). Anxiety was significantly related to Feeney et al.'s (1994) Preoccupation factor (r = .86); Brennan and Shaver's (1995) Jealousy/Fear of Abandonment factor (r = .83); and Rothbard et al.'s (1993) Fear of Rejection factor (r = .83).

Cronbach's alphas computed for the present study are .77 for the Avoidance scale and .90 for the Anxiety scale.

Relationship Questionnaire (RQ) (Bartholomew & Horowitz, 1991; Appendix C) was also used to categorize current attachment style into one of four discrete styles. The RQ is a widely used self-report instrument of adult attachment (Brennan, et al., 1991; Kemp & Neimeyer, 1999) and is an extension of Hazan and Shaver's (1987) original forced choice adult attachment scale that asked subjects to endorse one of three relationship styles (secure, avoidant, ambivalent). Bartholomew (1990) collected attachment related data on 77 college students through semi-structured interviews and self-report and friend ratings of attachment style, self-concept, sociability, and interpersonal problems. Through this, Bartholomew extended the Hazan and Shaver measure to capture two types of avoidance: fearful-avoidance and dismissing-avoidance. The RQ assesses Bartholomew's two underlying dimensions of attachment, model of self and model of other, producing the four categories: secure (positive self, positive other); preoccupied (negative self, positive other); dismissing (positive self, negative other); and fearful (negative self, negative other). The questionnaire asks participants to indicate

which of the four attachment style prototypes best characterizes their feelings and behavior in close relationships. Two forms are available. The first asks subjects to rate each of the four attachment styles on a 7 point continuous scale with 1 indicating "not like me" and 7 "very much like me"; the other is a forced-choice method similar to the original Hazan and Shaver measure ("choose the one that best fits your style of being in relationships"). Reliability data for the RQ using the continuous rating form was reported in a sample of 144 young adults in an 8 month longitudinal study (Scharfe & Bartholomew, 1994). Test-retest reliability coefficients for all four attachment classifications ranged from .45 for the dismissing category to .58 for the fearful category. The overall average across all categories was .53. Two month stability data reported for the 77 college students in the original norming sample was slightly higher than the 8 month stability ratings, ranging from .49 to .71 with an average of .61.

Parental Bonding Instrument (PBI) (Parker, et al., 1979; Appendix D) was used to assess the adolescent's attachment to primary parent at baseline and to their current caretaker (if they have one) at the most recent follow-up period. The PBI is a widely used instrument that assesses dimensions which correspond robustly with attachment theory (Chorpita & Barlow, 1998). It is regularly administered by the larger study. The original version of the Parental Bonding Instrument assesses subjects' memories of early parent-child interaction but it has been modified for use by adolescents to assess their current parental relationship (Kreisman, et al., 1995). Subjects are asked to think about their mother or mother figure, or father or father figure, and to name the parental figure who

they are thinking about (e.g., biological mother, biological father, step mother, step father, foster mother, grandmother, aunt) at baseline and during follow-up assessments.

The PBI is a 25 item, 4 point (1 = "very unlike" to 4 = "very like") Likert-scale that yields two subscale scores: Care (e.g., "Is affectionate to me"; "Could make me feel better when I was upset") and Overprotection (e.g., "Tries to control everything I do"; "Lets me go out as often as I want"). The higher the score, the more care or overprotection (control) is exercised by the parent. Kreisman and colleagues (1995) found good test-retest reliability (.76 for the Care scale and .63 for the Protection scale). In a study of 847 high school students, Canetti and colleagues (Canetti, Bachar, Galili-Weisstub, De-Nour, & Shalev, 1997) reported adequate internal reliability for both scales (Cronbach alphas: .75 for Care and .82 for Protection). Lopez (1996) found that Care scores were negatively correlated with attachment avoidance ($\underline{r}$ = -.23) and anxiety ($\underline{r}$ = -.24), and Overprotection scores were positively related to attachment avoidance ($\underline{r}$ = .24).

Internal reliability was calculated for the present study for the Care scale (α = .84) and the Overprotection scale (α = .73).

Dependent Variables

Coping Measure

Dealing With Problems (Murphy, Rotheram-Borus, & Reid, 1995; Appendix E) is the coping measure used by the larger study. Dealing with Problems was adapted from two sources: the Coping with Illness Questionnaire (CIQ) (Namir, et al., 1987) and a series of focus groups of HIV-positive adolescents and adults in four metropolitan areas (Murphy, Rotheram-Borus, & Marelich, 1995).

The CIQ is based on Folkman and Lazarus's (1980) Ways of Coping Checklist and the Health and Daily Living Form (Moos, Cronkite, Billings, & Finney, 1984) which assesses cognitive and behavioral responses made in efforts to cope with illness. The CIQ was normed on 50 individuals diagnosed with AIDS in a large metropolitan area. It yields eight coping strategies (Active-Positive Involvement, Active-Expressive/Information Seeking, Active Reliance on Others, Distraction, Cognitive-Positive Understanding/ Creating Meaning, Cognitive-Passive/Ruminative, Passive Resignation, and Avoidance-Solitary/Passive Behaviors) which are related to life concerns, social support, self-esteem, mood, and self-perceptions of current health status. For example, the Active-Positive strategy was significantly negatively correlated with the mood states of anxiety (.-34) and depression (-.50) using the Profile of Mood States (McNair, Lorr, & Droppleman, 1971); positively correlated with self-esteem (.58), using the Simmons Scale (Simmons, Klein, & Simmons, 1977); and positively correlated with ratings of satisfaction with one's total social support (.50). Inverse correlations were found between the Cognitive-Passive/Ruminative factor and self-esteem (-.39) and the global rating of health concerns (-.41).

The CIQ and additional items elicited from eight focus groups of HIV-positive adolescents and adults were administered to a sample of 351 HIV-infected adolescents and young adults and 270 HIV-infected adult women (total $\underline{n}$ = 621) (Murphy, Rotheram-Borus, & Marelich, 1995). All items are scored on a 5-point Likert scale (1 = Never to 5 = Always). A principal components analysis and a confirmatory factor analysis resulted in seven coping factors: Positive Action (e.g., "decided to get your life together"); Passive

Problem Solving (e.g., "daydreamed about better times in the past); Self-Destructive Escape (e.g., "used drugs more to forget"); Social Support (e.g., "went to a friend or professional to help you feel better"); Spiritual Hope (e.g., "started going to your place of worship"); Depression/Withdrawal ("deliberately got mad and yelled at people about little things to blow off steam"); and Non-Disclosure/Problem Avoidance ("tried to keep others from knowing how you were feeling"). These factors were validated through their associations with other clinical instruments. For example, for youth, anxiety was significantly, positively correlated with Passive Problem Solving (.31), Self-Destructive Escape (.27), Depression/ Withdrawal (.55), and Non-Disclosure/Problem Avoidance (.17). The sum of positive behaviors (e.g., quitting smoking, increased exercise, keeping medical appointments) was significantly, positively associated with Positive Action (.33), Social Support (.38), and Spiritual Hope (.11), and significantly, negatively associated with Non-Disclosure/Problem Avoidance (-.26), Self-Destructive Escape (-.13), and Depression/Withdrawal (-.13).

This scale was then modified for the larger study (i.e., the study from which the participants in the present study are drawn) by replacing the word "illness" with "problems," in order to capture general problems, and by eliminating the items from the factors of Non-Disclosure/Problem Avoidance and Depression/Withdrawal for brevity (Murphy, Rotheram-Borus, & Reid, 1995). Thus, five of the original seven factors were retained resulting in the 31-item Dealing with Problems measure. Cronbach's alphas were calculated when the scale was first administered to adolescents as part of the larger study: Positive Action (α = 86), Passive Problem Solving (α = 70), Self-Destructive Escape (α =

69), Social Support (α = 62) and Spiritual Hope (α = 70). The decision to eliminate the items from the two factors (Non-Disclosure/Problem Avoidance and Depression/Withdrawal) that measure the theoretically meaningful avoidant style of coping had resulted in capturing only those avoidant coping behaviors that focus on substance use and suicidality (in the Self-Destructive Escape factor). Thus, for the present study, the items from these two omitted factors were included as part of a supplement to the regularly scheduled follow-up assessments in order to capture different avoidant coping strategies (Appendix F). Alpha coefficients were calculated for the present study for the five factors retained: Positive Action (α = .89), Passive Problem Solving (α = .65), Self-Destructive Escape (α = .58), Social Support (α = .47) and Spiritual Hope (α = .67). A principal components analysis was conducted with the items from the omitted factors of Non-Disclosure/Problem Avoidance and Depression/ Withdrawal as reported below (see Results).

Grief Measure

Texas Revised Inventory of Grief (TRIG) (Faschingbauer, Zisook, & DeVaul, 1987; Appendix G) is a self-report measure of grief that is used by the larger study. The TRIG was originally normed on adults and has been slightly modified for parentally-bereaved children and adolescents by Sandler and Ayers (1997) by changing "this person" to "my parent." The TRIG was initially developed with 260 non-patient adults in various parts of the United States who had lost a loved one. Factor analysis yielded two factors, one reflecting a person's reaction to the death when it first happened (Past Behavior) and the second reflecting the current experience of the bereaved (Present Feelings)

(Faschingbauer, et al., 1987). A replication sample of 135 adult non-patients was also completed. Faschingbauer reported alpha coefficients of .77 for the original sample and .87 for the replication sample for the Past Behavior factor and alpha coefficients of .86 for the original sample and .82 for the replication sample for the Present Feelings factor. Schwartzberg and Janoff-Bulman (1991) administered the TRIG to 21 parentally-bereaved college students and reported alphas of .87 for Present Grief, .82 for Past Grief, and .91 for Total Grief. Construct validity was established by comparing the grief reactions of bereaved adult women who were financially dependent upon their husbands with bereaved husbands, hypothesizing that the widows would suffer greater life disruption than widowers. Additionally, Faschingbauer hypothesized that the death of a young or middle-aged adult would be a greater life disruption than that of an older adult whose death may be considered more "natural." As predicted, grief scores for widows and those bereaved persons who lost a younger member of their family were higher than their respective counterparts (Faschingbauer, et al., 1987).

The larger study uses the Present Grief scale only. It is comprised of 13 questions that ask about several dimensions of grief including longing, intrusion, distress, and painful reminiscing (e.g., "I still cry when I think of my parent"; "Things and people around me still remind me of my parent") on a 5 point Likert scale (1 = "completely false" to 5 = "completely true"). Higher scores reflect higher levels of grief. These items are included as part of the supplement administered immediately after the computerized instruments during the regularly scheduled follow-up interviews. Cronbach's alpha for the present study was .92.

Mental Health Measure

The Brief Symptom Inventory (BSI) (Derogatis & Spencer, 1982; Appendix H) is a widely used 53 item self-report mental health measure that is used by the larger study. On a 5-point Likert scale, respondents rate the extent to which they are experiencing symptoms which correspond to nine primary symptom scales of psychological distress or psychopathology. The nine BSI scales are: Obsessive-Compulsive (e.g., "having to check and double-check everything you do"), Paranoid Ideation (e.g., "feeling that others are to blame for most of your troubles"), Hostility ("feeling easily annoyed or irritated"), Somaticization ("faintness or dizziness"), Depression ("feeling hopeless about the future"), Interpersonal Sensitivity ("your feelings being easily hurt"), Anxiety ("feeling tense or keyed up"), Psychoticism ("the idea that someone else can control your thoughts"), and Phobic Anxiety ("feeling nervous when you are left alone"). In addition, the BSI yields a global measure of distress (Global Severity Index). The BSI is a shortened form of the Symptom Check List-90 (SCL-90; Derogatis, 1977) and retains its nine primary symptom scales. Correlations between the SCL-90 and BSI symptom scales range from .92 to .99 (Derogatis & Melisaratos, 1983).

Test-retest values range from .68 for the Somaticization scale to .91 for the Phobic Anxiety scale and the stability coefficient of the GSI was reported to be .90 (Derogatis & Melisaratos, 1983). The range of coefficients alphas have been reported from .75 on the Psychoticism scale to .89 on the Depression scale (Boulet & Boss, 1991). Concurrent validity of the BSI has been demonstrated through correlations with the Minnesota Multiphasic Personality Inventory (MMPI). For example, moderate correlations were

found between the corresponding BSI subscales and the MMPI Depression scale ($\underline{r}$ = .51), Paranoia scale ($\underline{r}$ =.51), and Hypochondriasis scale ($\underline{r}$ = .53) (Boulet & Boss, 1991).

Cronbach's alpha's were computed for each scale for the present study: Obsessive-Compulsive (α = .74), Paranoid Ideation (α = .76), Hostility (α = .83), Somaticization (α = .78), Depression (α = .75), Interpersonal Sensitivity (α = .82), Anxiety (α = .75), Psychoticism (α = .62), Phobic Anxiety (α = .82), and Global Severity Index (α = .95).

CHAPTER III

RESULTS

Preliminary Analysis

Means, standard deviations, ranges, measures of normality, and alphas for major study variables are presented in Table 2. All factor scores were examined for internal consistency using Cronbach's alphas.[2]

The alphas of the coping factors Positive Action and Spiritual Hope were comparable to those found in the larger study, while Passive Problem Solving had an alpha level slightly below that reported by the larger study but still within the acceptable range (.70 in the larger study, .65 in the present study). The factors of Social Support and Self-Destructive Escape however, had alpha levels below those reported by the larger study and below the acceptable range. After dropping two of the items on the Self-Destructive Escape factor because of little or no variance in the responses, ("planned ways to kill yourself" [M = 1.02, SD = .24, range = 1-4] and "traded sex for drugs or money" [M = 1.00, SD = 00, range = 0]), the alpha rose to 0.65. The coping factor of social support was dropped from further analyses as the alpha did not improve with the removal of any items. Because two factors -- Non-Disclosure/Problem Avoidance and

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[2]A principal components analysis with orthogonal rotation was conducted on the original 31 item coping measure used by the larger study to ascertain if a different factor structure produced more reliable factors. Results revealed that 62% of the variance was accounted for by seven factors. When the rotated matrix was examined, five of these factors were deemed usable in that they had at least three items which loaded highly (>.4) and cleanly (>.15 difference if loading on more than one factor). When examined, these five factors were roughly similar to the original factors but their Cronbach's alphas ranged from less than adequate to good (.56, .57, .61, .75, .89), thus not making a significant improvement to the measure.

Table 2

Means, Standard Deviations, and Ranges of Major Study Variables

Measure	N	M	SD	Observed Range	Skewness	Kurtosis	α
Dependent Variables							
Coping							
Positive Action	170	2.59	1.01	1 - 4.91	.30	-.85	.89
Passive Problem Solving	170	2.13	.79	1 - 4.20	.35	-.60	.65
Self Destructive Escape	170	1.21	.49	1 - 4.00	3.30	-13.15	.58
Social Support	170	1.59	.51	1 - 3.60	.91	1.01	.47
Spiritual Hope	170	2.45	.99	1 - 4.50	.28	-.98	.67
Detachment	193	1.73	.73	1 - 4.29	1.28	1.33	.81
Mental Health							
Brief Symptom Inventory	196	.40	.45	.02 - 2.60	2.03	4.86	.96
Independent Variables							
Current Attachment							
Avoidance Factor	196	3.39	.94	1.17 - 7.00	.03	.39	.77
Anxiety Factor	196	3.37	1.31	1 - 6.67	.33	-.60	.90
Parental Bonding							
PBI Care Scale	194	3.28	.59	1.42 - 4.00	-.86	.30	.84
PBI Overprotection Scale	194	2.15	.51	1 - 3.62	.20	-.13	.73

PBI = Parental Bonding Instrument.

Depression/Withdrawal -- that measure the theoretically meaningful coping style of avoidance had been dropped from the coping measure by the larger study, items for these factors were administered for use in the present study. An exploratory principal components analysis with orthogonal rotation was conducted on these 13 items. The data were examined to determine if they met the assumptions of principal components analysis. The sample size ($\underline{N}$ = 196) was ample to meet the standard requirement of 15 subjects per variable (Field, 2000). Second, the data were examined to determine if they met the assumption of sampling adequacy, that is, the analysis should yield distinct and reliable factors. Hutcheson & Sofroniou (1999) report that a KMO statistic of 0.8 or higher indicates excellent sampling adequacy and the present data yielded a KMO statistic of 0.89. Finally, the data also met the assumption of sphericity, that is, all the correlation coefficients between each variable are not close to zero, as indicated by a significant Bartlett's test ($\underline{p} < .001$) (Field, 2000).

The initial principal components analysis revealed that 51.34% of the variance was accounted for by two factors with Eigenvalues over 1. The rotated component matrix was used to evaluate the item/factor relationships. Overall, three items were dropped because of high loadings on both factors. Seven items loaded on Factor 1, which was labeled "detachment," and three items loaded on Factor 2 which was labeled "denial." Six of the seven detachment items had factor loadings of 0.6 or higher, an important consideration in the determination of a reliable factor solution (Guadagnoli & Velicer, 1988). Internal consistency reliability was good for detachment (α = .81) and less than adequate for denial (α = .56) so denial was dropped from further analysis. Thus, between the two

instruments, five coping strategies were measured: Positive Action (problem-focused), Passive Problem Solving (emotion-focused), Self-Destructive Escape (substance use), Spiritual Hope (spirituality), and Detachment (distancing).

Bivariate correlations of the subscales of the BSI were examined and based on the high, significant positive correlations between the subscales and the overall BSI (Appendix I), only the overall BSI score was used for subsequent analyses.

The dependent variables of overall BSI, the revised Self-Destructive Escape factor, and the Detachment factor were all positively skewed in violation of the assumption of normality for subsequent multiple regression analyses. Logarithmic transformations successfully reduced the skewness in overall BSI score and in the Detachment factor score (Appendix J). These transformed scores were used in all subsequent analyses. However, two separate transformations (logarithmic and square root) on the revised self -destructive escape factor did not reduce the skewness. Thus, the Self-Destructive Escape score of the coping measure was converted to a simple dichotomy (mean score 1 or less = 0 indicating never use drugs/alcohol/cigarettes to deal with problems; mean score greater than 1 = 1) and a logistic regression analysis was employed for this outcome variable.

Descriptive Statistics

Mean scores for the Global Severity Index (GSI) of the BSI were lower than the norming samples of non-patient adolescent males (20^{th} percentile) and slightly lower than the norming sample for females (45^{th} percentile). Both males and females in the current sample also reported lower GSI scores than those reported by similar aged college

students (Cochran & Hale, 1985). Consistent with published data, females in the present study had significantly higher overall mean scores than males ($\underline{t} = -2.07$, $\underline{p} = .04$).

Mean scores for the Care and Overprotection factors of the PBI measured at baseline were higher (i.e. indicating more Care and more Overprotection) than published reports from the original norming sample (Parker, et al., 1979) but similar to more recent adolescent reports (Lopez, Melendez, & Rice, 2000). When asked which caregiver they were thinking about prior to answering the items of the PBI, approximately 84% of adolescents named their biological mother; 10% named their aunt; 2% named their foster mother; 2% named their uncle; and less than 1% named their father or another relative.

Relationship Between the Two Measures of Attachment

Since attachment style was measured using two different instruments, each of which can be scored categorically and continuously, the correspondence of these scales was examined. Table 3 presents the distribution of attachment styles using the categorical procedures described by Brennan and colleagues (1998) and the forced choice portion of the RQ (Bartholomew and Horowitz, 1991). The total $\underline{N}$ of 144 reflects the fact that the forced choice portion of the RQ was added at a later date in the present study. A chi-square analysis indicated that the classifications obtained by the two measures were significantly related ($\chi^2(9, \underline{N} = 144) = 51.69$, $\underline{p} < .0001$). However, in order to predict group membership (e.g., the number of secures in Bartholomew's measure who report as secure in Brennan's measure), a kappa coefficient was computed (.15, $\underline{p} < .01$) indicating weak proportion of agreement. The differences that emerged between the two measures, however, were theoretically meaningful.

Table 3
Frequency Distribution of Attachment Styles

Attachment Style	Brennan, et al. (1998)		Bartholomew & Horowitz (1991)	
	n (n = 196)	%	n (n = 144)	%
Secure	38	19.4	28	19.4
Fearful	68	34.7	45	31.3
Preoccupied	25	12.8	16	11.1
Dismissing	65	33.2	55	38.2

As seen in Table 4, 52% of Brennan's secure participants endorsed Bartholomew's secure statement and 60% of Brennan's dismissing participants endorsed the dismissing category in Bartholomew's measure. Over 85% of Brennan's fearful participants were roughly divided between endorsing Bartholomew's fearful category (43.6%) or dismissing category (41.8%). A somewhat similar pattern emerged for Brennan's preoccupied category with 73.6% of preoccupied participants endorsing Bartholmew's preoccupied or fearful categories in equal proportions (36.8%). Bartholmew's model posits two forms of avoidance, the dismissing pattern, characterized by the downplay of the importance of attachment needs, and the fearful pattern, characterized by anticipated rejection by others. Thus, it is not surprising that individuals who report high levels of both avoidance and anxiety in an instrument which measures latent constructs would focus on the defensive self-sufficiency of the Bartholomew's dismissing statement ("I am uncomfortable getting

Table 4

Relationship Between Bartholomew's and Brennan's Self-Report Measures of Attachment

Brennan, et al.'s attachment types	Bartholomew's attachment types				
	Secure	Fearful	Preoccupied	Dismissing	Row total
Secure	13	7	2	3	25
	52.0%	28.0%	8.0%	12.0%	100.0%
	46.4%	15.6%	12.5%	5.5%	17.4%
Fearful	4	24	4	23	55
	7.3%	43.6%	7.3%	41.8%	100.0%
	14.3%	53.3%	25.0%	41.8%	38.2%
Preoccupied	3	7	7	2	19
	15.8%	36.8%	36.8%	10.5%	100.0%
	10.7%	15.6%	43.8%	3.6%	13.2%
Dismissing	8	7	3	27	45
	17.8%	15.6%	6.7%	60.0%	100.0%
	28.6%	15.6%	18.8%	49.1%	31.3%
Column total	28	45	16	55	144
	19.4%	31.3%	11.1%	39.2%	

Note: Cell entries are n's, row percentages, and column percentages. $\chi^2(9) = 51.69$, $p < .001$.

close to others"). Preoccupied individuals, whose pattern is characterized by the fear of rejection, might, in fact, focus on this portion of Bartholmew fearful statement ("I worry that I will be hurt if I allow myself to become too close to others").

Convergence of the continuous forms of both measures was examined by bivariate correlations between Brennan's Avoidance and Anxiety factors and the continuous ratings of each of Bartholomew's statements (Table 5). As expected, the Avoidance scale was significantly, positively related to Bartholomew's fearful statement (r = .33) and significantly negatively related to her secure statement (r = -.31). In addition, Brennan's Anxiety scale was significantly positively related to the preoccupied (r = .48) and fearful (r = .47) statements and negatively related to Bartholomew's dismissing statement (r = -.16).

The distribution of insecure attachment styles using both measures is roughly the same, as over 80% of the sample can be classified as insecurely attached. This is a much higher rate than has been found in other samples of adolescents and young adults which have used the three-factor model (e.g., Cooper, et al., 1998, 44% insecure; Mickelson, Kessler, & Shaver, 1997, 38% insecure in a nationally representative sample) or the four-factor model (e.g., Brennan, et al., 1991, 66% insecure; Kemp & Neimeyer, 1999, 50% insecure) using a self-report format. When compared to the distribution of attachment styles using the Adult Attachment Interview, the present sample is much more similar to adult clinical samples (see van IJzendoorn & Bakermans-Kranenburg, 1996 for a meta-analysis) which found 92% insecurely attached. Because the Brennan instrument measures theoretically sound, underlying dimensions of attachment which are then translated into categories, it was used for all further analyses.

Table 5

Pearson Product-Moment Correlations between Brennan's (1998) Avoidance and Anxiety Attachment Dimensions and the Continuous ratings of Bartholomew's (1991) RQ

Factor Score	2	3	4	5	6
1. Brennan Anxiety	.16*	.04	.47**	.48**	-.16*
2. Brennan Avoidance	-	-.31**	.33**	-.07	.02
3. Bartholomew Secure		-	-.12	.15*	.17*
4. Bartholomew Fearful			-	.37**	.04
5. Bartholomew Preoccupied				-	-.05
6. Bartholomew Dismissing					-

*$p \leq .05$. **$p \leq .01$.

Relationship Between Attachment and Other Study Variables

When the distribution of attachment categories using the Brennan, et al., (1998) measure was examined, no significant differences emerged by age, ethnicity, or gender. When examined using the dimensions of Avoidance and Anxiety, females had significantly higher scores on the Avoidance dimension than males ($t = -3.2$, $p = .001$) but there were no gender differences on the anxiety dimension. Further analyses indicated that there were no significant ethnic or age differences on the attachment dimensions. Contrary to expectations, the distribution of attachment categories was not related to bereavement status ($\chi^2(3, N = 195) = 2.81$, $p = .42$), disruptions in early caretaking ($\chi^2(3, N = 196) = 2.98$, $p = .39$), or baseline parental bonding (Care Scale: F (3, 190) = 1.64, $p = .18$;

Overprotection Scale: F (3, 190) = 1.44, p = .23).[3] However, when attachment was examined as a dimensional variable, adolescents who experienced disruption in their primary caregiving relationship had higher Anxiety scores on the Brennan measure than those who did not (t (106) = -2.04, p =.04). Independent sample t-tests of Brennan's Avoidance and Anxiety attachment factors revealed that adolescents who reported substance use as a strategy for coping with problems had significantly higher Anxiety scores than those adolescents who did not report substance use (t = -2.51, p < .05). There were no significant differences in reported substance use in the PBI Care and Overprotection scores; substance use did not vary by gender or ethnicity, however, older adolescents were more likely to report substance use (t = -2.00, p < .05).

Bivariate correlations of key variables under investigation were also calculated and are presented in Table 6. In order to reduce subject attrition when multiple variables that have missing data points are combined, ethnicity was collapsed into two categories, Black versus non-Black.[4]

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[3]An examination of the boxplot of the distribution of attachment styles in relation to the PBI Care factor revealed three outliers in the secure category and one outlier in the dismissing category whose Care scores were significantly below the mean for their respective category. When these outliers were removed from the analysis, results of the one-way ANOVA were significant (F (3, 186) = 3.91, p <.05) with post-hoc analyses using the Games-Howell procedure revealing that the mean Care score for securely attached adolescents was significantly higher than the mean Care score for fearful adolescents.

[4]The majority of adolescents who did not report their ethnicity as either Black or Hispanic were in fact biracial with one parent either Black or Hispanic. Several analyses conducted with key variables (e.g. age, gender, coping) determined that the dichotomizing of participants had minimal or no effect on the outcomes.

Table 6

Pearson Product-Moment Correlations of All Measures and Variables

Variable/Measure	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Gender	.04	.04	.19**	.07	.03	-.07	.22**	.23**	.08	-.11	.14*	-.09	.06	.00	.09	.10
2. Ethnicity	-	-.03	.03	-.10	.05	-.00	.02	.03	.00	-.04	-.02	-.18*	-.12	-.04	-.04	.00
3. Age	-	-	-.01	.09	-.03	-.13	.22**	.07	.03	.06	.08	.12	.08	.15*	.13	.08
4. Primary Caregiver disruption	-	-	-	-.06	.02	-.12	.01	.07	.13	.03	.13	.08	.00	.06	.06	.02
5. Parental death	-	-	-	-	.04	.07	-.03	.09	.10	.03	.13	.05	.07	-.00	-.00	.21**
6. Condition	-	-	-	-	-	.03	.04	-.14	.03	.11	-.22	-.08	-.04	.08	-.06	-.06
7. Baseline Parker Care	-	-	-	-	-	-	-..26***	-.14	-.17*	.13	-.20**	-.21**	-.24**	-.08	-.10	-.05
8. Baseline Parker	-	-	-	-	-	-	-	.16*	.11	-.15*	.05	-.01	.07	.05	.06	.05
9. Avoidance	-	-	-	-	-	-	-	-	.16*	-.61**	.24**	.05	.07	.11	.13	.28**
10. Anxiety	-	-	-	-	-	-	-	-	-	-.32***	.41***	.25**	.34***	.19*	.29**	.53**
11. Attachment (secc. vs. insec.)	-	-	-	-	-	-	-	-	-	-	-.16*	-.07	-.08	-.09	-.19*	-.18*
12. BSI Overall (log)	-	-	-	-	-	-	-	-	-	-	-	.25**	.45***	.17*	.21**	.56**
13. Positive Action	-	-	-	-	-	-	-	-	-	-	-	-	.73**	.15	.54***	.21**
14. Passive Problem Solving	-	-	-	-	-	-	-	-	-	-	-	-	-	.07	.48**	.41**
15. Self Destructive Escape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.13	.27*
16. Spiritual Hope	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.23**
17. Detachment (log)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note. N = 170. Gender: Male = 0, Female = 1; Ethnicity: Black = 0, Non-Black = 1; Caregiver disruption: No = 0, Yes = 1; Parental Death: No = 0, Yes = 1; Attachment Style: Insecure = 0, Secure = 1.

* $p \leq .05$. ** $p \leq .01$. ***$p \leq .001$.

When attachment style was examined as a dichotomous variable (secure vs. insecure) using Brennan, et al.'s, (1998) measure, a secure attachment style was significantly, negatively associated with the overall BSI, and with the coping factors of Spiritual Hope and Detachment. When examined as a continuous variable, the Anxiety factor correlated positively and highly with the dependent variables of overall BSI and all the coping factors while the Avoidance factor correlated only with Detachment. The Care scale of the PBI was, as expected, significantly negatively correlated with the PBI Overprotection scale, the Anxiety dimension of the attachment measure, the BSI, and unexpectedly, the coping strategy of Positive Action.

To examine whether the mean coping scale scores and the mental health scale score differed among the four attachment styles, five one-way ANOVAs were performed for each of the coping factors and the BSI and are presented in Table 7. Post hoc analysis using the Games-Howell multiple comparison test revealed that the significant F was accounted for by differences between fearful and secure styles, fearful and dismissing styles, and preoccupied and dismissing styles. Specifically, fearful adolescents were more likely to report using Detachment than their secure and dismissing peers and as expected, reported more mental health symptoms than those adolescents categorized as secure and dismissing. Preoccupied adolescents were more likely than dismissing adolescents to engage in passive problem solving strategies and avoidant methods of coping.

Multivariate Analysis

Selected variables were excluded from the analyses to reduce the possibility of multicollinearity among predictor variables that were highly correlated. The bivariate

Table 7

Means, Standard Deviations, and One-Way Analyses of Variance (ANOVA) for Attachment Style on Coping Strategies and Mental Health Symptoms

Variable	Secure		Fearful		Preoccupied		Dismissing		ANOVA
	M	SD	M	SD	M	SD	M	SD	F (3, 166)
Positive Action	2.44	.86	2.71	.99	3.01	1.12	2.39	1.03	2.63†
Passive Problem Solving	2.01	.81	2.27	.80	2.49_a	.74	1.93_b	.72	3.82**
Spiritual Hope	2.07_a	.87	2.68_b	.99	2.70	1.04	2.34	.95	3.59*
Detachment (log)	$.32_a$	.34	$.64_b$	.41	$.57_b$	.33	$.34_a$	.31	11.01*** F (3, 188)
BSI (log)	-1.99_a	1.22	-1.06_b	1.30	-1.53	1.34	-1.97_a	1.29	5.84***

Note. N = 170. Means with different subscripts differ significantly at $p < .05$ using the Games-Howell procedure. BSI = Brief Symptom Inventory.
*$p < .05$. **$p \leq .01$. *** $p \leq .001$. †$p = .052$

correlations of predictor variables that were not a major focus of the present study were also examined. No significant associations were found between any of the dependent variables and the independent variable of treatment condition so this variable was excluded from further analysis. In addition, since age was significantly associated only with the Self-Destructive Escape factor, it was included in the analysis of this dependent variable only.

In order to examine attachment as both a continuous variable and as a categorical variable, and to control for experiences relevant to attachment, two sets of hierarchical multiple regression analyses were conducted for the dependent variables of Positive Action, Passive Problem Solving, Spiritual Hope, and Detachment. In the first set, attachment was entered as a continuous variable, using the dimensions of Avoidance and Anxiety. The data were examined to verify that the required assumptions of multiple regression were met (independence, linearity, normality, multicollinearity, and homoscedasticity).[5]

A simple power analysis as described by Cohen & Cohen (1983) was conducted which indicated that a minimum N of 151 would provide an adequate number of observations with 8 independent variables to detect a population R^2 as small as .10 with an 85% probability (using $\alpha = .05$).

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[5]An examination of the correlation matrix of the predictor variables revealed that none of the predictor variables correlated very highly with one another, meeting the assumption of no multicollinearity among predictor variables. An examination of the plots of the standardized residuals against the standardized predicted values for each multiple regression equation conducted, revealed that the residuals were randomly and evenly dispersed throughout the plot indicating that the data met the assumptions of linearity and homoscedasticity. Finally, an examination of the normal probability plot, that is, the observed residuals plotted against the normal distribution, revealed that the residuals fell on or very close to the normal distribution line thus meeting the assumption of normality.

Hypothesis 1

Current attachment style (dimensional or categorical) will predict the coping strategies used by adolescents of HIV positive parents after controlling for demographic characteristics (age, gender, ethnicity), experiences relevant to attachment (disruption in primary caregiving, death of parent) and baseline parental bonding.

Variables were entered into the equations in the order suggested by the theoretical model and their importance so their effects could be partialled out and controlled for. Demographics (gender, ethnicity) were entered as a block at Step 1; Disruption in care by primary caregiver and parental death was entered as a block in Step 2; Baseline attachment style (the Care and Overprotection factors of the PBI) was entered at Step 3; and Attachment style (Avoidance and Anxiety factors) was entered at Step 4. Since a significant association was found between the Avoidance factor and gender, a Gender X Avoidance interaction was included in the final step of each regression equation to examine whether gender moderated the influence of attachment. With each step, the regression model was reevaluated to determine whether the additional variables added significantly to the prediction of the coping strategy, over and above the contribution of the previously entered variables. The results will be presented for each coping strategy measured.

Attachment Measured as a Dimensional Variable

Positive Action

The first hierarchical regression equation was significant with 17% of the variance in Positive Action accounted for by the final model (Table 8). The addition of the baseline

Table 8

Hierarchical Multiple Regression Predicting Positive Action with Attachment as a Dimensional Variable

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	Step 5: Beta	R^2	ΔR^2
1. Demographics						.04*	.04
Ethnicity	-.16*	-.17*	-.16*	-.14	-.14		
Gender	.09	-.12	-.13	-.14	.14		
2. Parental Disruption						.05	.02
Primary Caregiver		.12	.10	.07	.05		
Parental Death		.07	.08	.06	.05		
3. Baseline Attachment						.10*	.04
Care			-.22**	-.19*	-.17*		
Overprotection			.04	.06	-.07		
4. Current Attachment						.14*	.04
Avoidance (centered)				.01	.26*		
Anxiety				.21**	.20**		
5. Avoidance X Gender					.31**	.17**	.04

Note. N = 167. Gender: Male = 0, Female = 1; Ethnicity: Black = 0, Non Black = 1; Caregiver disruption: No = 0, Yes = 1; Parental Death: No = 0, Yes = 1.
*p ≤ .05. **p < .01.

attachment at Step 3 contributed 4% of the variance while current attachment contributed another 4% at Step 4. Specifically, low perceived care at baseline and high scores on the Anxiety dimension were individually strong predictors of Positive Action. However, an additional 4% of the variance in Positive Action was explained when the interaction term of Gender X Avoidance was added to the equation at Step 5. Specifically, females with higher avoidance scores used Positive Action to a lesser degree than males (Figure 1).

Passive Problem Solving

The multiple correlation for the total model was significant with 17% of the variance in Passive Problem Solving accounted for by the total model (Table 9). Similar to the coping strategy of Positive Action, baseline attachment independently contributed 6% of the variance while current attachment contributed an additional 9% of the variance in Passive Problem Solving. Low perceived care at baseline and a current attachment style high in Anxiety were the strongest predictors of Passive Problem Solving. The Gender X Avoidant interaction term was not significant, suggesting that Avoidance was not differentially linked with the use of Passive Problem Solving for males and females.

Spiritual Hope

The multiple correlation for the total model was significant with the total model accounting for 15% of the variance in the use of Spiritual Hope as a coping strategy (Table 10). Attachment significantly added to the prediction of the use of spirituality ($\Delta R^2 = .08$, $p < .01$) in the expected direction. Specifically, adolescents with an attachment style high in Anxiety were more likely to use spirituality as a coping strategy than those whose scored lower on the Anxiety dimension. However, an additional 6% of the variance in

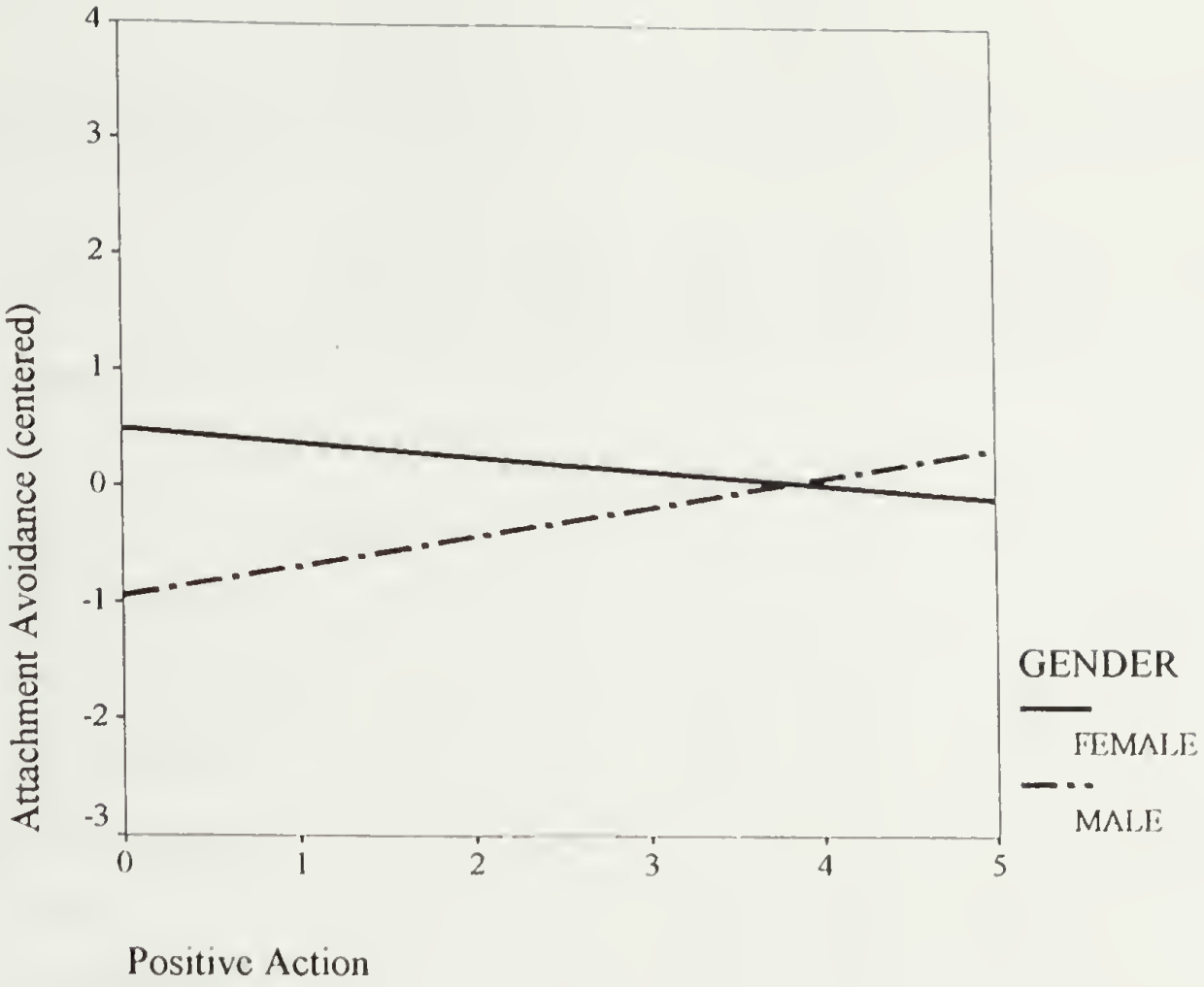

Figure 1. Interaction between Gender and Attachment Avoidance predicting Positive Action.

Table 9

Hierarchical Multiple Regression Predicting Passive Problem Solving with Attachment as a Dimensional Variable

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	Step 5: Beta	R^2	ΔR^2
1. Demographics						.02	.02
Ethnicity	-.13	-.13	-.12	-.10	-.10		
Gender	-.07	-.07	-.05	-.05	.22		
2. Parental Disruption						.02	.00
Primary Caregiver		.01	-.01	-.05	-.06		
Parental Death		.04	.06	.02	.02		
3. Baseline Attachment						.08**	.06
Care			-.24**	-.20*	-.20*		
Overprotection			-.01	-.03	-.03		
4. Current Attachment						.17***	.09
Avoidance				.01	.06		
Anxiety				.31***	.31***		
5. Avoidance X Gender					-.20	.17	.00

Note. N = 167. Gender: Male = 0, Female = 1; Ethnicity: Black = 0, Non-Black = 1; Caregiver disruption: No = 0, Yes = 1; Parental Death: No = 0, Yes = 1.
*p ≤ .05. **p < .01. ***p < .001.

Table 10

Hierarchical Multiple Regression Predicting Spiritual Hope with Attachment as a Dimensional Variable

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	Step 5: Beta[a]	R^2	ΔR^2
1. Demographics						.01	.01
Ethnicity	-.03	-.04	-.03	-.02	-.02		
Gender	.09	.08	.07	.05	.04		
2. Parental Disruption						.01	.00
Primary Caregiver		.03	.03	-.01	-.03		
Parental Death		-.01	-.00	-.03	-.04		
3. Baseline Attachment						.02	.01
Care			-.09	-.04	-.02		
Over-protection			.02	-.01	-.02		
4. Current Attachment						.09**	.08
Avoidance (centered)		.07	.38**				
Anxiety		.27**	.26**				
5. Avoidance X Gender				-.38**	.15**	.06	

Note. N = 167. Gender: Male = 0, Female = 1; Ethnicity: Black = 0, Non-Black = 1; Caregiver disruption: No = 0, Yes = 1; Parental Death: No = 0, Yes = 1.
*$p \leq .05$. **$p < .01$.

Spiritual Hope was explained when the interaction term of Gender X Avoidance was added to the equation at Step 5. Specifically, females with higher Avoidance scores used Spiritual Hope to a lesser degree than males (Figure 2).

Detachment

The first multiple regression analysis of Detachment revealed that 32% of the variance in Detachment was accounted for by the total model. Both the Avoidance and Anxiety dimensions of the current attachment uniquely contributed 29% of the variance in Detachment. The Gender X Avoidance interaction term was not significant suggesting that avoidance was not differentially linked with Detachment for males and females.

Since many of the predictor variables were highly insignificant, the regression was rerun after eliminating independent variables whose p values were .5 and above (gender, ethnicity, disruption with primary caregiver, and baseline Care and Overprotection scales) in order to rule out the possibility that these variables were "stealing" variance from other predictors (Table 11). When the predictor variables of Anxiety, Avoidance and parental death were entered in individual blocks they explained a full 34% of the variance in Detachment with Anxiety making the most significant contribution (26%).

Self-Destructive Escape

A logistic regression equation was used for the coping factor of Self-Destructive Escape since it had been converted to a dichotomous variable. Predictor variables were entered into the logistic regression analysis as blocks in the same order as in the multiple regression equations and since bivariate correlations demonstrated a significant association between age and the Self-Destructive Escape factor, it was added to the model. Table 12

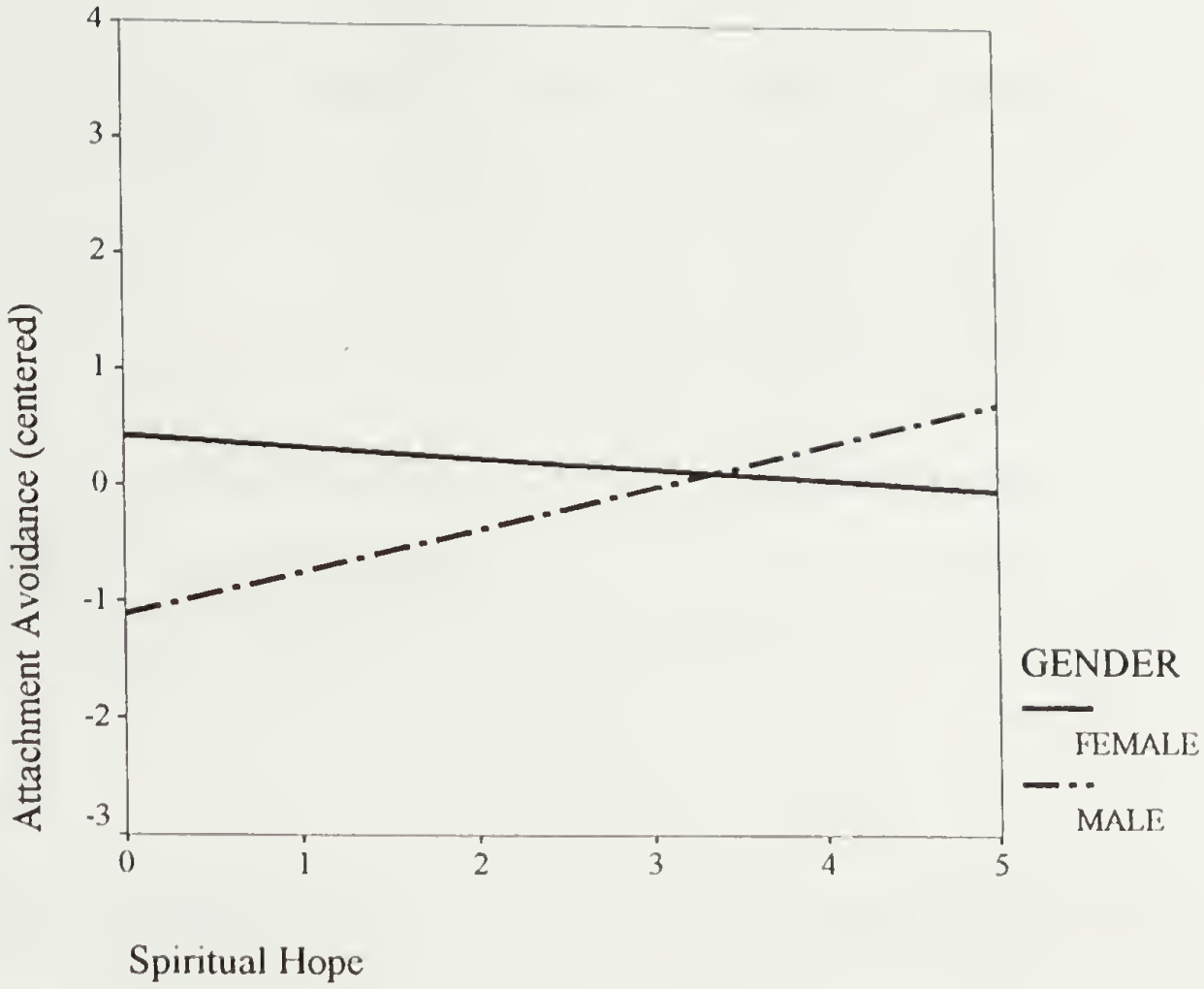

Figure 2. Interaction between Gender and Attachment Avoidance predicting Spiritual Hope.

Table 11

Hierarchical Multiple Regression Predicting Detachment with Attachment as a Dimensional Variable

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	R^2	ΔR^2
1. Parental Death	.21**	.16**	.15*	.04**	.04
2. Current Attachment-Anxiety		.51***	.49***	.30***	.26
3. Current Attachment-Avoidance			.19**	.34**	.04

Note. N = 192. Parental Death: No = 0, Yes = 1.
*p ≤ .05. **p ≤ .01. ***p ≤ .001.

Table 12

Summary of Logistic Regression Analysis Predicting Self Destructive Escape

Variable	B	SE	Odds Ratio	Wald Statistic
Step 1				
Ethnicity	0.78	0.38	1.08	0.04
Gender	0.34	0.40	1.41	0.73
Age	0.17	0.09	1.19	3.85*
Step 2				
Caregiving Disruption	-0.19	0.42	0.82	0.21
Parental Death	0.08	0.38	1.09	0.05
Step 3				
Baseline PBI Care	0.03	0.32	1.04	0.01
Baseline PBI Overprotection	0.35	0.39	1.42	0.80
Step 4				
Attachment Avoidance	0.17	0.19	1.18	0.76
Attachment Anxiety	0.29	0.13	1.34	4.47*

Note. N = 167. Gender: Male = 0, Female = 1; Ethnicity: Black = 0, Non-Black = 1; Caregiver disruption: No = 0, Yes = 1; Parental Death: No = 0, Yes = 1. PBI = Parental Bonding Instrument.
*p < .05.

presents the summary of the logistic regression analysis predicting the use of Self-Destructive Escape. While the Beta weights of the Anxiety factor of current attachment and age were significant, the overall model was not significant ($\chi^2(9, \underline{N} = 167) = 11.65$, $\underline{p} = .23$).

Attachment Measured as a Categorical Variable

In the second set of multiple regression analyses, the independent variable of attachment was entered as a dichotomous variable. Since an anxious attachment style was the most robust predictor of coping strategies, the second set of multiple regression equations sought to differentiate the two attachment styles which are characterized by high levels of anxiety. Three dummy codes were entered for attachment category to compare the preoccupied group with the secure, dismissing and fearful groups. Predictor variables were entered into the equation in the same sequence as above.

Positive Action

The use of attachment as a categorical variable yielded little change in the overall model (Table 13). The variance in Positive Action was again accounted for by the Care scale of the baseline attachment measure and current attachment ($\underline{R^2} = .13$). The preoccupied category was used as the reference category. Specifically, preoccupied adolescents with low perceived maternal care are more likely to use Positive Action than those classified as dismissing and those classified as secure.

Passive Problem Solving

In the second multiple regression equation using attachment as a categorical variable, the total model was again significant and accounted for 13% of the variance in

Table 13

Hierarchical Multiple Regression Predicting Positive Action with Attachment as a Categorical Variable

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	R^2	ΔR^2
1. Demographics					.04*	.04
Ethnicity	-.16*	-.17*	-.16*	-.14		
Gender	-.09	-.12	-.13	-.14		
2. Parental Disruption					.05	.02
Primary Caregiver		.12	.10	.07		
Parental Death		.07	.08	.06		
3. Baseline Attachment					.10*	.04
Care			-.22 **	-.19*		
Overprotection			-.04	-.06		
4. Current Attachment					.13**	.03
Secure vs. Preoccupied				-.23*		
Fearful vs. Preoccupied				-.16		
Dismissing vs. Preoccupied				-.26*		

Note. N = 167. Gender: Male = 0, Female = 1; Ethnicity: Black = 0, Non-Black = 1; Caregiver disruption: No = 0, Yes = 1; Parental Death: No = 0, Yes = 1.
*p ≤ .05. **p < .01.

Passive Problem Solving (Table 14). Low perceived care was again significantly related to the use of Passive Problem Solving as a coping strategy. Additionally, adolescents who exhibited a preoccupied attachment style were more likely to use Passive Problem Solving as a coping strategy than those classified as dismissing and to a marginal degree, those classified as secure (Beta = -.19, p = .07).

Spiritual Hope

The overall model was not significant when attachment was entered as a categorical variable (F (9, 157) = 1.24, ns). However, when predictor variables whose p values were .4 and above were eliminated from the equation (gender, ethnicity, PBI, parental death, and disruption in care) leaving only the attachment variables, the equation was significant (F (3, 166) = 3.59, p < .05). Preoccupied adolescents were much more likely to use Spiritual Hope than securely attached adolescents (Table 15).

Detachment

Nineteen percent of the variance in Detachment was accounted for by the total model when current attachment was entered as a categorical variable. No differences were found between the preoccupied and the other categories so the fearful category was used as the reference category. When predictor variables whose p values were greater than 0.4 were removed from the model, parental death and attachment were rerun as predictor variables. In this new model, which accounted for 18% of the variance in Detachment, parental death, and a fearful attachment style, in contrast to a secure or dismissing style, were the strongest predictors of Detachment (Table 16). There was no significant difference between the preoccupied and fearful attachment styles.

Table 14

Hierarchical Multiple Regression Predicting Passive Problem Solving with Attachment as a Categorical Variable

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	R^2	ΔR^2
1. Demographics					.02	.02
Ethnicity	-.13	-.13	-.12	-.08		
Gender	-.07	-.07	-.05	.06		
2. Parental Disruption					.02	.00
Primary Caregiver		.01	-.01	-.04		
Parental Death		.04	.06	.05		
3. Baseline Attachment					.08**	.06
Care			-.24**	-.23**		
Overprotection			-.01	-.02		
4. Current Attachment					.13**	.05
Secure vs. Preoccupied				-.19		
Fearful vs. Preoccupied				-.13		
Dismissing vs. Preoccupied				-.32**		

Note. N = 167. Gender: Male = 0, Female = 1; Ethnicity: Black = 0, Non-Black = 1; Caregiver disruption: No = 0, Yes = 1; Parental Death: No = 0, Yes = 1.
*$p \leq .05$. **$p < .01$.

Table 15

Multiple Regression Predicting Spiritual Hope with Attachment as a Categorical Variable

Variables	Beta	R^2
Current Attachment		.06*
Secure vs. Preoccupied	-.26*	
Fearful vs. Preoccupied	-.01	
Dismissing vs. Preoccupied	-.18	

Note. N = 170. *p ≤ .05.

Table 16

Hierarchical Multiple Regression Predicting Detachment with Attachment as a Categorical Variable

Step Variables	Step 1: Beta	Step 2: Beta	R^2	ΔR^2
1. Parental Death	.21**	.18**	.04**	.04
2. Current Attachment			.18***	.14
Secure vs. Fearful		-.32***		
Preoccupied vs. Fearful		-.05		
Dismissing vs. Fearful		-.35***		

Note. N = 192. Parental Death: No = 0, Yes = 1.
*p ≤ .05. **p ≤ .01. ***p ≤ .001.

Hypothesis 2

Current attachment style (dimensional or categorical) will predict the level of distress in adolescents of HIV positive parents after controlling for demographic characteristics (age, gender, ethnicity), experiences relative to attachment (disruption in primary caregiving, death of parent), and baseline attachment.

In the first hierarchical multiple regression analysis of mental health symptoms when attachment was entered as a dimensional variable, the multiple correlation was significant with 28% of the observed variance accounted for by the total model. As seen in Table 17, the Anxiety dimension uniquely contributed 11%; parental death contributed 8% and gender contributed an additional 6% of the variance in mental health symptoms. Specifically, mental health symptoms were most frequent in girls, the bereaved, and those high in attachment Anxiety. The Gender X Avoidance interaction term was not significant suggesting that Avoidance was not differentially linked with mental health symptoms in males and females.

When attachment was examined as a categorical variable to predict mental health symptoms, the fearful style was used as the default category. The overall proportion of variance explained by the model decreased slightly to 21%. When attachment was added as a block in the final model it uniquely accounted for 5% of the variance in mental health symptoms. Gender and parental death remained significant predictors of mental health symptoms. Specifically, female adolescents who displayed a fearful style of attachment

Table 17

Hierarchical Multiple Regression Predicting BSI with Attachment as a Dimensional Variable

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	Step 5: Beta	R^2	ΔR^2
1. Demographics						.06**	.06
Ethnicity	-.04	-.02	-.02	-.03	-.02		
Gender	.23**	.19**	.18*	.15*	.50*		
2. Parental Disruption						.14***	.08
Primary Caregiver		.13	.12	.08	.07		
Parental Death		.27***	.28***	.24***	.24***		
3. Baseline Attachment						.16***	.02
Care			-.13	-.08	-.07		
Over-protection			.02	-.02	-.02		
4. Current Attachment						.27***	.11
Avoidance			.09	.21*			
Anxiety			.33***	.33***			
5. Avoidance X Gender				-.40		.28***	.01

Note. $N = 193$. Gender: Male = 0, Female = 1; Ethnicity: Black = 0, Non-Black = 1; Caregiver disruption: No = 0, Yes = 1; Parental Death: No = 0, Yes = 1.
*$p \leq .05$. **$p < .01$. ***$p \leq .001$.

were more likely to report mental health symptoms than their secure or dismissing peers but there were no significant differences between the fearfuls and the preoccupieds in the final model (Table 18).

Hypothesis 3

Securely attached adolescents will report more adaptive coping strategies (i.e., Positive Action, Social Support, and Spiritual Hope) and fewer mental health symptoms than insecurely attached adolescents.

Results of the ANOVA and multiple regression equations partially supported Hypothesis 3. Securely attached adolescents did not report using more adaptive coping strategies and in fact, used fewer adaptive coping strategies than their fearful and preoccupied peers (Social Support was not measured due to poor reliability). However, in partial confirmation of Hypothesis 3, securely attached adolescents reported fewer mental health symptoms than fearful adolescents.

Hypothesis 4

Preoccupied adolescents will report more emotion-focused (i.e., Passive Problem Solving, Depression/Withdrawal), and help seeking (i.e., Spiritual Hope) coping strategies and more mental health symptoms than adolescents who evidence a secure or dismissing style of attachment.

Hypothesis 4 was partially confirmed. Results of the multiple regression analyses when attachment was entered as a categorical variable revealed that preoccupied adolescents were more likely to report Passive Problem Solving strategies than their dismissing peers and to a marginal degree, their secure peers. When attachment was

Table 18

Hierarchical Multiple Regression Predicting BSI with Attachment as a Categorical Variable

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	R^2	ΔR^2
1. Demographics					.06**	.06
Ethnicity	-.04	-.02	-.02	-.03		
Gender	.23***	.19**	.18*	.17*		
2. Parental Disruption					.14***	.08
Primary Caregiver		.13	.12	.10		
Parental Death		.27***	.28***	.26***		
3. Baseline Attachment					.16	.02
Care		-.13	-.12			
Over-protection		.02	-.01			
4. Current Attachment					.21**	.05
Secure vs. Fearful			-.19*			
Dismissing vs. Fearful			.25***			
Preoccupied vs. Fearful			.06			

Note. N = 193. Gender: Male = 0, Female = 1; Ethnicity: Black = 0, Non-Black = 1; Caregiver disruption: No = 0, Yes = 1; Parental Death: No = 0, Yes = 1.
*p ≤ .05. **p ≤ .01. ***p ≤ .001.

measured as a continuous variable, regression analyses revealed that adolescents who were high in attachment Anxiety were more likely to use Spiritual Hope, but when measured categorically, no differences emerged between preoccupied and fearful adolescents. Preoccupied adolescents did not differ from their peers in their use of spirituality as a coping strategy. Contrary to predictions however, when attachment was measured categorically, preoccupied adolescents did not report a greater number of mental health symptoms than their secure or dismissing peers.

Hypothesis 5

Dismissing adolescents will report more distancing (i.e., Self-Destructive Escape, Detachment) coping strategies than secures and preoccupieds and will report more mental health symptoms than secures but fewer mental health symptoms than preoccupied adolescents.

Hypothesis 5 was not confirmed.

Hypothesis 6

The coping strategies and level of mental distress for adolescents who evidence a fearful attachment style will be explored.

Bereaved fearful adolescents were more likely than secure and dismissing adolescents to use adaptive coping strategies when demographic variables, disruption in caregiving and baseline attachment were controlled for. As expected, bereaved fearful adolescents reported more mental distress than bereaved adolescents who evidenced a secure or dismissing attachment style.

In order to examine the role of coping strategies and attachment in the prediction of mental health symptoms, a series of regression analyses was conducted to determine whether individual coping strategies mediated the role of attachment in the number of mental health symptoms. Specifically, since the Anxiety dimension was consistently the most robust predictor of the variance in both coping strategies and mental health symptoms, the next series of analyses were conducted to determine whether coping strategies mediated the relationship between attachment and mental health functioning. The proposed model followed Baron and Kenny's (1986) criteria for establishing a mediated relationship: First, the independent variable (Anxiety) must be significantly correlated with the mediator variable (Coping); second, the mediator must be significantly correlated with the dependent variable (BSI); and third, when the independent variable and the mediator are controlled for, a previously significant relationship between the independent and dependent variables is significantly decreased or eliminated altogether.

In order to meet the first two requirements, bivariate correlations between the independent variable (Anxiety), the mediator variables (Coping) and the dependent variable were examined (Table 6). Significant bivariate relationships were demonstrated between Anxiety and each coping variable (Positive Action, Passive Problem Solving, Self-Destructive Escape, Spiritual Hope and Detachment); and between each coping variable and the dependent variable of BSI. In order to examine the third requirement, that the association between the independent variable of Anxiety and the dependent variable of BSI should be substantially reduced when the effect of the mediator variable of coping strategies is controlled, five hierarchical regression equations were conducted predicting

BSI. In each set of regression analyses, variables that were previously found to predict BSI and the coping variables were used. Gender was entered on Step 1; parental death on Step 2; baseline Care was entered on Step 3; Anxiety was entered on Step 4; and the coping variables were entered separately at Step 5 of each equation. To control for a Type I error introduced by multiple correlations with the same dependent variable, a Boneferoni correction was employed by dividing the significance level for each test (.05) by the number of independent variables to determine a significance level. Each regression equation had 5 independent variables so the significance level was reset to .01.

In the first equation when Positive Action was entered at Step 5, 36% of the variance in BSI scores was explained by the total model ($\underline{F}$ (5, 161) = 17.83, $\underline{p} < .001$) (Table 19), anxiety uniquely explained 12% of the variance in BSI scores while Positive Action contributed an additional 8%. The partial correlation between Anxiety and BSI after the effects of Positive Action, gender, baseline Care, and parental death had been removed was not substantially lower than the bivariate correlation between Anxiety and BSI (.41 vs. .32), indicating that Positive Action was not a mediator of attachment. Gender and parental death also remained significant in the final model; specifically, girls who lost one or both parents had higher BSI scores.

In the second regression equation when Passive Problem Solving was entered at Step 5, 44% of the variance in BSI scores was accounted for by the full model with Passive Problem Solving independently contributing 17% of the variance ($\underline{F}$ (5, 161) = 25.22, $\underline{p} < .001$) (Table 20). Examination of the partial correlation revealed that the effect of Anxiety was reduced by 36% when Passive Problem Solving, gender, baseline Care,

Table 19

Hierarchical Multiple Regression Predicting BSI with Positive Action

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	Step 5: Beta	R^2	ΔR^2
Gender	.27***	.24***	.23**	.20**	.25***	.07***	.07
Parental Death		.21**	.23**	.20**	.18**	.12**	.05
PBI Baseline Care Scale			-.19**	-.13	-.08	.15**	.04
Attachment Anxiety				.36***	.29***	.27***	.12
Positive Action					.30***	.36***	.08

Note. N = 167. BSI = Brief Symptom Inventory. PBI = Parker Parental Bonding. Gender: Male = 0, Female = 1; Parental Death: No = 0, Yes = 1.
**p ≤.01. ***p ≤.001.

Table 20

Hierarchical Multiple Regression Predicting BSI with Passive Problem Solving

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	Step 5: Beta	R^2	ΔR^2
Gender	.27***	.24***	.23**	.20**	.20***	.07***	.07
Parental Death		.21**	.23**	.20**	.18**	.12**	.05
PBI Baseline Care Scale			-.19**	-.13	-.05	.15**	.04
Attachment Anxiety				.36***	.22***	.27***	.12
Passive Problem Solving					.44***	.44***	.17

Note. N = 167. BSI = Brief Symptom Inventory. PBI = Parker Parental Bonding. Gender: Male = 0, Female = 1; Parental Death: No = 0, Yes = 1.
**p ≤.01. ***p ≤.001.

and parental death were controlled for (.41 vs. .26) suggesting that Passive Problem Solving was a partial mediator of the attachment-mental health relationship. Again, gender and parental death remained significant in the final model in the expected direction.

When the possible mediating effect of Spiritual Hope was examined, 33% of the variance was explained by the full model (F (5, 161) = 15.49, $p < .001$). Spiritual Hope contributed a modest 5% of the variance in comparison with 12% of the variance contributed by Anxiety, thus the addition of Spiritual Hope did not substantially reduce the effect of attachment on BSI (Table 21).

When the dichotomous variable of Self-Destructive Escape was entered at Step 5, it contributed a modest 3% of the variance in BSI scores out of the total 31% explained by the full model (F (5, 161) = 14.23, $p < .001$) (Table 22). Thus, the addition of Self-Destructive Escape did not substantially reduce the effect of attachment on BSI.

In the final regression analysis, when the possible mediating effect of Detachment was examined, 40% of the variance in BSI scores was predicted in the final model (F (5, 184) = 24.53, $p < .001$). When entered on Step 4, Anxiety accounted for 12% of the variance while Detachment contributed an additional 13% of the variance in BSI scores. When the partial correlation between Anxiety and BSI was examined in the final step with Detachment, gender, parental death, and baseline Care controlled for, there was a 67% reduction suggesting that Detachment is a partial mediator of the attachment-mental health relationship (Table 23).

Table 21

Hierarchical Multiple Regression Predicting BSI with Spiritual Hope

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	Step 5: Beta	R^2	ΔR^2
Gender	.27***	.24***	.23**	.20**	.19**	.07***	.07
Parental Death		.21**	.23**	.20**	.20**	.12***	.05
PBI Baseline Care Scale			-.19**	-.13	-.12	.16***	.04
Attachment Anxiety				.36***	.29***	.27***	.12
Spiritual Hope					.24***	.33***	.05

Note. N = 167. BSI = Brief Symptom Inventory. PBI = Parker Parental Bonding. Gender: Male = 0, Female = 1; Parental Death: No = 0, Yes = 1.
**p ≤.01. ***p ≤.001.

Table 22

Hierarchical Multiple Regression Predicting BSI with Self-Destructive Escape

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	Step 5: Beta	R^2	ΔR^2
Gender	.27***	.24***	.23**	.20**	.21**	.07***	.07
Parental Death		.21**	.23**	.20**	.20**	.12**	.05
PBI Baseline Care Scale			-.19**	-.13	-.12	.15**	.04
Attachment Anxiety				.36***	.32***	.27***	.12
Self-Destructive Escape					.18**	.31**	.03

Note. N = 167. BSI = Brief Symptom Inventory. PBI = Parker Parental Bonding. Gender: Male = 0, Female = 1; Parental Death: No = 0, Yes = 1; Self-destructive Escape: Never used drugs/alcohol to deal with problems = 0, Used drugs/alcohol to deal with problems = 1.
**p ≤.01. ***p ≤.001.

Table 23

Hierarchical Multiple Regression Predicting BSI with Detachment

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	Step 5: Beta	R^2	ΔR^2
Gender	.24***	.22***	.21**	.19**	.17**	.06***	.06
Parental Death		.26***	.27***	.23***	.17**	.13***	.07
PBI Baseline Care Scale			-.16*	-.10	-.11	.15*	.02
Attachment Anxiety				.35***	.12	.27***	.12
Detachment (log)					.44***	.40***	.13

Note. N = 190. BSI = Brief Symptom Inventory. PBI = Parker Parental Bonding. Gender: Male = 0, Female = 1; Parental Death: No = 0, Yes = 1.
*p ≤.05. **p ≤.01. ***p ≤.001.

Hypothesis 7

The differences between bereaved adolescents who view their current caretaking situation as supportive and those who view their current situation as less supportive will be explored.

Description of the Bereaved Subsample

In order to examine Hypothesis 7, analyses were conducted with the bereaved subsample only. Of the 113 parentally-bereaved adolescents, approximately 35% lost their mother, 41% lost their father, and 24% lost both parents. Fifty-seven percent of adolescents reported that they currently had an adult whom they considered their caregiver and 43% did not. Of those adolescents who had a caregiver, 47% named their biological mother as a caregiver, 20% named their grandmother; 14% named an aunt, and 10% named their father.

In order to examine possible differences in the attachment styles of bereaved adolescents whose current caregiver was their mother (thus, their father died) and those whose current caregiver was another relative or adult, the current caregiver named was converted to a simple dichotomy (0 = not mother, 1= mother). An independent samples t test was conducted with the Avoidance and Anxiety dimensions of current attachment and revealed that among paternally bereaved adolescents with a current caregiver, those cared for by their mothers had higher Avoidance scores ($t = -2.42$, $p < .05$). There was not a significant association when attachment was looked at as a categorical variable.

Contrary to expectations, there were no significant differences among attachment styles and the presence of a caregiver ($\chi^2(3, N = 113) = 3.04$, $p = .39$). Independent samples t tests (Table 24) conducted with other major study variables revealed that having a caregiver was not associated the level of grief, problem focused (Positive Action), emotion-focused (Passive Problem Solving) or help seeking (Spiritual Hope) coping strategies, but was significantly associated with the distancing coping strategies (Detachment) in theoretically meaningful ways. Specifically, bereaved adolescents who named a current caregiver reported less distancing coping than those who did not.

Two one-way ANOVAs between each attachment category with the current perceived Care and Overprotection scales of the PBI as the dependent variables revealed no significant differences in the quality of the bereaved adolescent-current caregiver relationship as a function of attachment style.

In order to examine grief reactions among the bereaved sample the bivariate correlations between the grief measure (TRIG) and the major study variables were

calculated and are presented in Table 25. Significant positive correlations were found between grief and the avoidance dimension of current attachment style and grief and gender, with females having higher grief reactions. Grief reactions were negatively associated with current perceived care from the present caregiver, that is adolescents who perceived their current caretaker as providing care and nurturance reported fewer grief symptoms.

Table 24

Differences on Select Variables between Bereaved Adolescents Who Report Having a Caregiver and Those Who Do Not

	No Caregiver		Caregiver			
Variables	M	SD	M	SD	df	t
TRIG	4.01	.91	3.88	.99	104	.63
Positive Action	2.68	.88	2.60	1.10	96	.35
Passive Problem Solving	2.29	.72	2.11	.84	96	1.04
Spiritual Hope	2.55	.99	2.39	1.03	96	.76
Detachment (log)	.63	.38	.47	.36	111	2.41*
BSI (log)	-1.12	1.16	-1.51	1.21	111	1.74
Attachment Anxiety	3.53	1.30	3.46	1.21	111	.29
Attachment Avoidance	3.63	.94	3.32	1.03	111	1.66

TRIG = Texas Revised Inventory of Grief. BSI = Brief Symptom Inventory. BSI = Brief Symptom Inventory.
*$p < .05$.

Table 25

Pearson Product-Moment Correlations of Grief (TRIG) with Major Study Variables for Bereaved Subsample

Variable/Measure	r	N
Treatment Condition	.01	106
BSI (log)	.15	106
Attachment Avoidanee	.19*	106
Attachment Anxiety	.14	106
Positive Action	.02	91
Passive Problem Solving	.17	91
Spiritual Hope	.02	91
Detaehment (log)	.21*	106
Age	-.05	106
Gender	.22*	106
Ethnieity	-.04	106
Time sinee Death - Study Parent	-.12	73
Time sinee Death - Non- Study Parent	.19	52
Disruption in Care	-.13	106
PBI Care - (baseline)	-.06	106
PBI Overprotection (baseline)	-.09	106
PBI Care - (eurrent earegiver)	-.30**	60
PBI Overprotection (eurrent caregiver)	.17	60

Note. Treatment Condition: Control = 0, Intervention = 1; Gender: Male = 0, Female = 1; Ethnieity: Blaek = 0, Non-Black = 1; Disruption in Care: No = 0, Yes = 1. BSI = Brief Symptom Inventory. PBI = Parker Parental Bonding. TRIG = Texas Revised Inventory of Grief.
*$p < .05$. **$p < .01$.

Multivariate Analysis

A hierarchical multiple regression analysis was conducted for the dependent variable of grief using the TRIG (Table 26). Independent variables were entered into the equation in an order similar to previous multivariate analyses. In order to limit the number of independent variables in this analysis of the subsample of bereaved adolescents (n = 106), the demographic variables of age and ethnicity were excluded from the equation as bivariate correlations indicated that these variables were highly unrelated to the dependent variable of grief.

In the multiple regression analysis, 14% of the variance in grief was accounted for by the total model. (F (8, 97) = 2.39, $p < .05$). Gender and early disruption with primary caregiver were the only significant predictors of grief reactions in the final model. That is, girls who did not experience early disruption with their primary caregiver reported higher grief reactions than those who did experience disruption. In order to determine whether parental death had been more recent for girls who did not report early disruption than for the total sample, an examination of the amount of time that had passed since the death of the study and non-study parent was conducted. The amount of time that had elapsed since the death of the study parent and the non-study parent was not significantly different than in the total sample (4 and 9 years respectively). As measured by the factors of anxiety and avoidance, attachment was not a significant predictor of grief reactions.

Table 26

Hierarchical Multiple Regression Predicting Grief (TRIG) with Attachment as a Dimensional Variable

Step Variables	Step 1: Beta	Step 2: Beta	Step 3: Beta	Step 4: Beta	R^2	ΔR^2
1. Demographics					.05	.05
Ethnicity	-.06	-.04	-.07	-.05		
Gender	.22*	.25*	.29**	.25*		
Age	-.05	-.06	-.14	-.17		
2. Parental Disruption					.08	.03
Primary Caregiver		-.17	-.20*	-.21*		
3. Parental Bonding (baseline)					.13	.05
Care			-.13	-.12		
Overprotection			-.21*	-.21*		
4. Current Attachment					.17	.04
Avoidance				.17		
Anxiety				.10		

Note. N = 106. TRIG = Texas Revised Inventory of Grief. PBI = Parental Bonding Instrument.
*p ≤ .05. **p < .01.

CHAPTER IV

DISCUSSION

The present investigation examined the role of attachment style in the coping strategies of adolescents who have experienced a significant life stressor -- a parent with a chronic, life-threatening illness or the premature death of that parent. According to attachment theory, adolescents' internal working models, as represented in attachment styles, should mediate the ways in which they cope with stressors including the loss or threatened loss of their primary attachment figure. Research has found that a secure attachment style acts as a protective factor enabling individuals to cope more effectively with life's stressors and regulate affect in light of these stressors (Ainsworth, 1979; Kobak & Sceery, 1988; Sroufe & Waters, 1977). The patterns of coping styles displayed by insecurely attached individuals are less clear and the ways in which they cope may be related to particular types of stressors. Most studies that have documented a relationship between self-reported attachment style, coping style and distress have used the original three-factor model, leaving out the more recent differentiation between the two types of avoidance. Few studies have examined the role of attachment style in adolescents coping with threatened or actual parental death. The present study sought to extend previous research in this area by using the four-factor model for categorizing attachment into discrete styles -- secure, fearful, preoccupied, dismissing -- using an instrument derived from a two-dimensional model in order to more fully capture the meaningful variation among individuals (Bartholomew & Shaver, 1998; Brennan, et al., 1998).

The study had two main aims. First, it sought to examine the role of attachment in the coping and distress levels of adolescents whose parents are living with or have died from AIDS. Specifically, when confronted with general life stressors, does attachment style explain both the types of coping strategies adolescents use and their level of distress? Moreover, are there differences between parentally-bereaved adolescents and those whose parents are still living? Second, the study attempted to examine the role of attachment and post-bereavement support systems in the grief reactions of parentally-bereaved adolescents.

Attachment style was conceptualized as an individual's cognitive and affective internal representation, or internal working models, of the self and other in relationships with close others or romantic partners (Bowlby, 1969, 1979; Hazan & Shaver, 1987). These internal working models, theorized to be established in early childhood within the child-caregiver relationship, evolve through the lifespan and may be subject to change. Attachment relationships in adulthood are most clearly articulated in romantic relationships and are differentiated from the caregiver-child bond by an increase in mutuality. For adolescents, at the crossroads between childhood and adulthood, these intense bonds are evident in significant romantic relationships but may be just as important in significant peer relationships. In the study presented here, internal working models were measured on the dimensions of anxiety and avoidance which were further categorized into four styles representing varying degrees of these two dimensions. Anxiety represents fear of abandonment while Avoidance represents discomfort with closeness and dependency. These styles are theorized as guiding interpersonal behaviors and are most often activated

in response to stress. Among a wide number of adaptive and less adaptive strategies individuals use to cope with stress, five types were measured in the present study: problem-focused, emotion-focused, spirituality, distancing, and substance use. Adolescents who are living in families affected by HIV/AIDS are also affected by parental substance abuse and poverty, and may be more likely to have experienced childhood disruption in parental caregiving as a result. Thus, disruption in the primary caregiving relationship during early childhood, as well as parental death occurring in adolescence, were both examined in the present study as these non-normative events may influence adolescents' internal working models and their behavioral manifestations.

Attachment as a Predictor of Coping Strategies

Overall, these results provide strong support for the robustness of attachment style differences as a predictor of coping strategies, confirming Hypothesis 1. In the main, adolescents who exhibit an attachment style characterized by a high degree of anxiety in close relationships -- categorically those classified as preoccupied and fearful -- tend to use a wide repertoire of coping strategies to deal with problems. When individual coping strategies were examined, attachment anxiety was consistently the best individual predictor of adolescents' use of problem-focused, emotion-focused, substance use, distancing, and spiritual coping strategies.

The use of coping strategies usually characterized as adaptive -- here, problem-focused and spiritual strategies -- varied by gender and type of attachment insecurity. In general, adolescents high in attachment anxiety were more likely to use these adaptive strategies. This finding was unexpected for the use of problem focused strategies. This use

of many strategies demonstrates a degree of cognitive flexibility that attachment theory would not predict. Why adolescents high in attachment anxiety in the present study were more likely to report problem-focused coping may be considered in the context of their high reported use of all the coping styles measured here. The pattern of stress reduction by anxious-ambivalent or preoccupied individuals involves a variety of attempts to seek comfort which ultimately do not soothe or reduce inner feelings of distress. Thus, the use of a wide variety of coping strategies may be reflective of this general pattern. The use of a support-seeking strategy such as spirituality by adolescents high in anxiety is, however, consistent with attachment theory and in partial confirmation of Hypothesis 4. The use of spirituality has been associated with individuals whose attachment styles are characterized by a positive model of others (secure and preoccupied). Individuals with a preoccupied attachment style tend to seek out others but have fears of abandonment, thus the establishment of a relationship with God, whose love is usually characterized as unconditional, might be extremely attractive to preoccupied individuals (Kirkpatrick, 1999).

This pattern did not hold, however, for females who evidenced high degrees of attachment anxiety and avoidance, that is, those classified as fearful. Relative to the preoccupieds, this group was less likely to use the adaptive problem-focused and spiritual strategies. While few studies have examined the fearful pattern and its relation to coping strategies per se, individuals with a fearful style tend to view themselves as incapable and others as unavailable or unreliable. Thus, their failure to use problem-solving or spiritual strategies may relate to an inability to mobilize or even consider possible options

(Bartholomew & Horowitz, 1991) and at the same time, an unwillingness to depend on a higher being such as God or an organized religion (Kirkpatrick, 1999).

Another interesting and unexpected finding in the prediction of coping strategies is the inverse relationship between perceived parental care measured at baseline and the use of problem-focused coping. Contrary to expectations, adolescents who reported low levels of parental warmth and care were more likely to use problem-focused coping and this remained significant even after attachment was added to the equation. In fact, the anxiety dimension and perceived parental care each uniquely contributed equal amounts of the variance in problem-focused coping. This is inconsistent with Lopez's (1996) finding of a positive association between college students' PBI Care scores and their use of constructive thinking, a cognitive process which is associated with problem-solving strategies. It is also inconsistent with a second finding of Lopez, that when current attachment was added to the regression equation, the contribution of PBI Care scores became nonsignificant in the prediction of constructive thinking. These discrepancies may reflect the different samples. In contrast to college students, adolescents from poor, inner-city environments who have experienced lower levels of parental warmth may have also experienced parental role models who, on a daily basis, engaged in creative problem-solving with issues related to survival (e.g., food, utilities, keeping safe from crime) or in order to obtain alcohol or illegal drugs. Moreover, these adolescents may have received implicit or explicit messages regarding the necessity of these skills for their own survival in the future. These messages may in fact be very present in the minds of adolescents dealing with threatened or actual parental death.

Individuals exhibiting a preoccupied style of attachment have been found to use emotion-focused strategies in their coping with missile attacks, combat training, the process of divorce, relational difficulties, and the fear of personal death (Lussier, et al., 1997; Mikulincer, et al., 1993; Mikulincer & Florian, 1995). Results of the present study are consistent with these findings and confirm Hypothesis 3. Preoccupied adolescents used more emotion-focused coping than their dismissing or secure peers.

Moreover, with regard to the present study, the use of emotion-focused coping was also related to low perceived parental warmth and care, a finding which may be consistent with other reports that demonstrate an association between low parental warmth toward children and adolescents and later perceived lack of control over environmental events which may relate to symptoms of anxiety and depression (Chorpita & Barlow, 1998; McIntyre & Dusek, 1995). The ruminative type of emotion-focused coping measured here has been cited as a less effective strategy and is associated with more mental distress in adults (Nolen-Hoeksema, et al., 1994; Roberts, Gotlib, & Kassel, 1996) and in children and adolescents dealing with parental cancer (Compas, Worsham, Ey, & Howell, 1996).

Attachment anxiety was, unexpectedly, a strong predictor of distancing coping strategies, although avoidance also made a modest contribution (23% for anxiety vs. 6% for avoidance). When examined categorically, preoccupied adolescents reported greater use of distancing strategies in comparison to their secure and dismissing peers. There were no differences found between preoccupieds and fearfuls however.

Thus, contrary to Hypothesis 5, dismissing adolescents did not report greater use of distancing coping strategies than secures or preoccupieds. In fact, dismissing adolescents, similar to their secure counterparts, reported few coping strategies overall. This finding is consistent with findings of college students who were asked to recall a recent stressful event (Kemp & Neimeyer, 1999) but in contrast to several reports which have found strong relationships between avoidant attachment patterns and distancing coping strategies (Lussier, et al., 1997; Mikulincer, et al., 1993; Mikulincer & Florian, 1995). While previous research has speculated that avoidantly attached children and adults use a defensive strategy of minimizing negative emotions (e.g., Cassidy, 1988), it is unclear why they would report fewer coping strategies. It may be that the admission of the use of coping strategies implies the existence of problems to be dealt with.

The adaptive coping strategies examined here -- problem-focused and spirituality - have been cited as positive and effective methods of coping with stress and are associated with a secure style of attachment (Kirkpatrick, 1999; Mickelson, et al., 1997). However, contrary to Hypothesis 3, securely attached adolescents did not report greater use of these adaptive strategies than their insecurely attached peers, and in fact, used very few coping strategies overall. This finding is consistent with other studies that have examined the use of problem-focused coping strategies to deal with stressors which do not involve a threat to a desired interpersonal relationship. For example, Mikulincer and colleagues (1993, 1995; Birnbaum, et al., 1997) found that securely attached adults did not use more problem-focused strategies in their coping with missile attacks during a period of war, during the course of combat training, or when filing for divorce. However,

secure adults were more likely than insecurely attached adults to use problem-focused strategies with romantic partners when faced with physical separation or difficult relational or trust-violation issues (Feeney, 1998; Lussier, et al., 1997; Mikulincer, 1998). The present study measured the use of problem-solving strategies in relation to general life stressors, not particular problems and not in a social context. Thus, it may be that secures' use of problem-focused coping serves the attachment-related function of maintaining felt security by engaging in behaviors that reestablish or promote feelings of security in relationships (Pietromonaco & Barrett, 2000), but not in situations that are unrelated to an attachment relationship.

Attachment and Mental Distress

Insecure attachment styles have been demonstrated to be differentially related to mental health and the results of the present study strongly support these relationships, confirming Hypothesis 2. Again, attachment anxiety was the most robust predictor of mental health symptoms, consistent with a number of studies that have examined the link between preoccupied and fearful attachment and rates of depression and anxiety (Bartholomew & Horowitz, 1991; Carnelley, Pietromonaco, & Jaffe, 1994; Kobak & Sceery, 1988; Mickelson, et al., 1997). While the present examination found higher rates of mental health symptoms among fearfully attached adolescents when compared to dismissing and securely attached, categorical analyses were unable to detect differences between preoccupied adolescents and their secure, dismissing, or fearful peers.

Parental death and gender made additional, although more modest contributions to the prediction of mental health symptoms. The finding that the occurrence of parental

death explained a modest amount of the variance in mental health functioning is also consistent with a number of studies of childhood and adolescent bereavement (Gersten, Beals, & Kallgren, 1991; Gray, 1987; Meshot & Leitner, 1993; Schwartzberg & Janoff-Bulman, 1991; West, Sandler, Baca, Pillow, & Gersten, 1991). The fact that bereaved girls reported more mental distress is consistent with some reports (Gersten, et al., 1991; Meshot & Leitner, 1993) although other studies have failed to find gender differences among bereaved adolescents (Gray, 1987; Silverman & Worden, 1992).

When coping strategies were added on the last step in separate regression equations for the prediction of mental distress, it was found that a reliance on emotion-focused and distancing coping strategies partially mediated the relationship between attachment and mental health symptoms although the effects were somewhat different for each strategy. When emotion-focused coping strategies were added in the final step, attachment anxiety remained a significant predictor of mental distress in the full model but its effect was partially reduced. When the coping strategy of distancing was added to the equation, attachment became non-significant in the final model. Thus, when the previously established relationship between attachment anxiety and coping strategies is considered, these results revealed that there is a main effect of attachment style on coping and, for females especially, on mental distress as well, a finding that is consistent with Mikulincer and colleagues' (1993) study of adults coping with missile attacks. However, for females, the effect of attachment on mental distress may be mediated by negative coping strategies, a finding that is at odds with the Mikulincer study, which found no mediation effect. It is consistent, however, with Roberts and colleagues (1996), who found that a fearful

attachment style contributed to depressive symptoms through the impact of dysfunctional attitudes. Moreover, negative emotionality was found to influence the effect of a preoccupied attachment style on the reporting of physical and psychiatric symptoms (Feeney & Ryan, 1994). Neither of these reports, however, found gender differences.

Establishing the true nature of the attachment-coping-distress relationship is precluded by the cross-sectional examination of these variables in the present study. However, it should be noted that when baseline perceptions of parental care, current attachment, and coping strategies were entered consecutively in separate steps to predict mental health symptoms, parental care became non-significant when current attachment was added to the equation. This is consistent with attachment theory which posits that attachment insecurity develops early in life through inconsistent and unavailable parenting (Ainsworth, et al., 1978; Bowlby, 1969), becomes internalized throughout childhood and is continually confirmed in current relationships (Bartholomew, 1990; Hazan & Shaver, 1987), and for adolescents especially, through the continuity of parental behaviors established early in life (Bowlby, 1988; Thompson, 1999). In other words, the link between low levels of parental care and later mental distress may be influenced by the internalization of a model of close others as unavailable and rejecting as expressed in high levels of attachment anxiety.

Parental Disruption: Separation and Loss

The loss of an attachment figure, at any stage in the lifespan, has been theorized to have profound implications for an individual's internal working model and mental health. This may be particularly true for children and adolescents facing unexpected or premature

parental loss (Brown, et al., 1986; Bowlby, 1980). The pattern of results for the adolescents studied here yielded modest, yet complex, support for that premise. First, there were no overall differential effects of bereavement status on attachment patterns. Insecurely attached adolescents were no more likely than securely attached adolescents to have experienced the death of one or both parents. Adolescents who experienced maternal disruption evidenced higher levels of attachment anxiety than those who did not, but maternal disruption was not related to coping strategies or mental health symptoms. When the predictions of coping and mental distress were examined independently, controlling for attachment, bereavement was modestly related to higher levels of distancing coping and for girls, mental distress. When the coping strategy of distancing and attachment were added to the equation in the prediction of mental distress however, distancing uniquely contributed almost twice as much of the variance in mental distress for girls than bereavement did. This was also true for emotion-focused coping. These results suggest that while parental bereavement is related to mental distress, the internal personality variables of attachment and coping seem to be more salient factors affecting mental health and, in the current sample at least, the effect of parental bereavement on later mental health functioning does not seem to be as profound as other studies have reported. This finding however, must be interpreted with caution in light of the unique context in which these adolescents have lived.

The differential effects of gender were also seen in the pattern of grief responses among the bereaved subsample. Low levels of baseline perceived parental overprotection (but not care) and continuous caretaking (that is, no maternal disruption) were significant

predictors of high levels of grief for girls. Current attachment however was not related to grief although there was a trend toward significance on the avoidance dimension. It may be that the higher grief reactions among these girls reflect the fact that the parental death is the first significant disruption in parental care they have experienced or that they just simply loved this parent more. The influence of low levels of parental overprotection on grief reactions is more difficult to interpret. Adolescents coping with an HIV infected parent have been found to assume the parenting duties of younger children, care for ill parents, and in general, report higher levels of parentification (Draimin, Hudis, & Segura, 1992; Zayas & Romano, 1994). Female adolescents may be more likely to take on these roles (Compas, et al., 1994) and as a result, may not have been subjected to high levels of parental control. If the deceased parent is the mother, these daughters may have over-identified with their mother, a pattern that has been found in daughters of chronically ill mothers (Weingarten & Worthen, 1997). Thus parental death may signal the end of their role as caretakers and moreover, a sense that their efforts may have been futile. As Bowlby (1979) notes, their prolonged grief may contain, "an element of self-punishment for having failed, and their perpetual mourning has become a sacred duty" (p. 98) to the deceased parent and a way to make retribution for this perceived failure.

Attachment Styles

The present study used two different self-report measures of attachment. The RQ (Bartholomew & Horowitz, 1991) is a widely used instrument derived and refined from the measure conceived by Hazan and Shaver (1987), one of the earliest self-report measures of adult attachment. The Multi-Item Measure of Adult Romantic Attachment

(now called Experiences in Close Relationships) developed by Brennan and colleagues (1998), is derived from a large number of extant adult and adolescent self-report attachment scales and is conceptually equivalent to the horizontal and vertical axes of Bartholomew's measure.

Some support was shown for the convergence of the two measures and the differences were theoretically meaningful. Adolescents whose attachment styles were characterized by high levels of anxiety on the Brennan measure were more likely to endorse one of the two Bartholomew statements which depict high levels of attachment anxiety -- the fearful and preoccupied statements -- while those whose attachment style had high levels of both anxiety and avoidance endorsed the fearful or dismissing statements on Bartholomew's measure. Most secure subjects were secure on both measures when both continuous and categorical ways of measurement were used although there were slightly more secures when the Brennan measure was used. This is an interesting finding in light of a recent examination of the measurement properties of the Multi-Item Measure which revealed that it is less sensitive in assessing secure attachment styles than it is in assessing insecure styles, apparently because it discriminates more precisely among insecure patterns (Fraley, Waller, & Brennan, 2000). Given this recent finding, it might have been expected that in the present study, the Bartholomew measure would have yielded a higher number of securely attached participants than Brennan's measure. Future research should continue to focus on the convergence of these measures using the revised version of the Experiences in Close Relationships (ECR-R, Fraley, et al., 2000).

The present study sought to elucidate the effects of bereavement on attachment status. For children and adolescents, parental loss, either by separation or death has been posited as a threat to core aspects of self-identity and internal representations of others (Brown, et al., 1986; Bowlby, 1979, 1980). Thus, it might be expected that bereavement would be associated with higher levels of attachment insecurity or at the very least, there would be a differential effect of bereavement on the types of insecure attachment patterns. Yet for the adolescents studied here, there were no differences in attachment style as a function of bereavement. This finding is consistent with a national sample of adolescents and adults who lost a parent before age 16 (Mickelson, et al., 1997). And while bereaved adolescents in the present study reported more mental distress than non-bereaved, attachment style accounted for substantially more of the variance in mental distress than bereavement status. This suggests that the attachment styles of the present cohort may be longstanding patterns.

While there have been few studies to date that have found such an extremely high rate of attachment insecurity (80%) in non-clinical samples, this high rate is comparable with other studies which have examined the attachment patterns among high-risk adolescent, adult, (Brennan, et al., 1991; Feeney & Ryan, 1994; Mickelson, et al., 1997) and infant samples (Broussard, 1995; Vondra & Barnett, 1999). Specifically, these studies have typically found avoidance to be the hallmark of attachment patterns in the offspring of families coping with poverty, substance abuse, and chronic illness. The evidence suggests that these patterns of attachment evolved, in part, from variables associated with economic hardship, parental substance abuse, harsh, inconsistent parenting, and chronic

illness. For example, economic hardship has been associated with harsh, inconsistent and unresponsive parenting (McLoyd, 1998; Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000), styles found among the parents of insecurely attached infants and young children, particularly those evidencing an avoidant or disorganized style (Vondra & Barnett, 1999; Weinfield, Sroufe, Egeland, & Carlson, 1999). In addition, studies that have documented the parenting practices of substance abusers have found both mothers and fathers to be more emotionally rejecting and at the same time overprotective, lacking in warmth, coercive, and in general, less adaptive and responsive to their children's needs (Eiden, Peterson, & Coleman, 1999; Emmelkamp & Heeres, 1988). Moreover, even when socioeconomic status is controlled for, substance abusing parents demonstrate less effective parenting (Bauman & Levine, 1986). These parenting styles have been associated with dismissing and fearful attachment patterns in adolescence and young adulthood. For example, Brennan and colleagues (1991), found that 47% of college students who reported having a parent with a drinking problem were fearfully attached and 14% evidenced a dismissing pattern. In a national sample, Mickelson and colleagues (1997) found that having a parent with a substance abuse disorder was positively related to being avoidant but not to being anxious. High levels of avoidant attachment patterns have also been found in college students who reported parental chronic illness in childhood (Feeney & Ryan, 1994).

The adolescents studied here demonstrate similar patterns. Roughly 68% of adolescents in the present study had attachment styles which were characterized by high levels of avoidance either alone or in combination with anxiety. Data from the larger study

shows that 81% of parents enrolled in the larger study had used alcohol in their lifetime, 78% reported drug use (37% injecting drugs), and 65% reported having sexual partners who injected drugs (Rotheram-Borus, Lee, Gwadz, & Draimin, in press). It is estimated that the age of onset of alcohol and marijuana use ranges from 13 to 15 and for hard drugs, 17 to 19 years of age among individuals who eventually use such drugs (Dinwiddie, Reich, & Cloninger, 1992; Van Etten & Anthony, 1999). Thus, given that the parents of these adolescents were, on average, 25 years old when they were born, it is likely that the parents' substance use began in the parents' own adolescence, long before these children were born. Further, it is likely that parents' substance use continued throughout these adolescents' childhoods based on the appearance of HIV infection in the mid 1980's when these adolescents were in their middle-childhood years. It is not known the extent to which maternal drug use occurred in pregnancy although some studies have suggested that there is some decline in substance use during pregnancy (Gilchrist, Hussey, Gillmore, Lohr, & Morrison, 1996).

It is also interesting to note that in the present study, paternally bereaved adolescents who are currently cared for by biological mothers were more likely to be avoidant than bereaved adolescents who were independent or had other caretakers. The interpretation of these findings is unclear. While a majority of the parents of these adolescents engaged in high risk drug and sexual behaviors prior to their involvement in the study, these behaviors decreased significantly after learning of their diagnosis and becoming symptomatic (Rotheram-Borus, et al., in press). However, as van IJzendoorn (1995) notes, the continuities observed between attachment in infancy and later in

adolescence probably reflect continuities in parenting style and the way in which parents deal with affect.

Implications of Findings, Limitations, and Suggestions for Future Research

This study has several major strengths. The first is the sample size. Previous studies that have focused exclusively on adolescents' responses to threatened or actual parental death have had extremely small sample sizes. Second, all of the adolescents in the present study are dealing with the same parental chronic illness or death from that illness and all are from low socioeconomic backgrounds, factors that many previous studies have not controlled for. Additionally, many of these studies have been cross-sectional and have not controlled for prior occurrences of parental disruption or baseline perceptions of parental care and protection.

The study also demonstrates the utility of examining attachment constructs using continuous measures rather than relying solely on categorical measures. The use of continuous measures yielded richer information about the internal processes of the adolescents studied here, information that would have been lost if only categorical measures were used.

The present study underscores the importance of the role of attachment styles in the mental processes of adolescents coping with parental illness and death. Moreover, it makes a significant contribution to the adolescent and young adult attachment literature which has mainly focused on the experiences of college students leaving out large

segments of economically disadvantaged youth who are more likely to experience significant life stressors.

Overwhelmingly, the patterns of internal working models of the adolescents studied here are governed by a compulsive self-reliance. For some, this model of the self is coupled with a dismissing stance toward the need for affectively close relationships; for others, it is coupled with a fear of being rejected. In Bowlby's original theorizing, and in much of the attachment literature that has followed, a secure attachment style has been posited as highly adaptive when compared to patterns of insecurity in that it embodies an internal model of the self as autonomous and others as reliable, available, and necessary, especially in times of stress. Insecure attachment styles on the other hand are characterized as less or mal-adaptive in that the internal models of these individuals are distinguished by a negative model of the self or a model of others as untrustworthy or rejecting (Belsky, 1999). However, for the adolescents in the present study, there was no clear advantage to being securely attached, at least in relation to coping and mental distress. On these measures, securely attached adolescents could not be distinguished from their dismissing peers. Thus, for some of the adolescents in the present study, a dismissing style may be just as adaptive as a secure style in light of the environments that they were raised in and continue to inhabit. These adolescents appear to have experienced caregivers as consistently less sensitive and remote, probably from a very early age; and well into young adulthood, they continue to experience reliance on the self as a necessary requirement for survival. For them, the *consistent* absence of sensitivity from caregivers seems to promote an adaptive self-reliance.

However, this compulsive self-reliance is less adaptive when it is coupled with a desire for, but fear of, being rejected by attachment figures, as is the case with the fearfuls. These adolescents reported high levels of mental distress and their high reported use of multiple, conflicting coping strategies indicates that they manage their distress in a disorganized, ineffective fashion. In contrast to the dismissing adolescents, the fearfuls' early experience of disrupted maternal relationships and the likely inconsistent caregiving style that both elicited and rejected childhood displays of affect and proximity seeking does not appear to have served them well. The results presented here, however, are limited by the fact that all the data is self-reported and there are no other sources of information as to the functioning of these participants outside of self-reported mental distress. Further research using multiple informants such as parents, caregivers, or school reports would provide additional information about their functioning. Future research should also examine how the dismissing adolescents vary in their responses to stressors. Bowlby (1979, 1980) asserted that the hardened self-sufficiency displayed by avoidantly attached individuals is superficial and when subjected to a high-impact stressor (such as the death of an attachment figure), this defensive self-reliance breaks down or results in maladaptive behavior. On the other hand, Bowlby believed that some avoidant individuals may have such tenuous ties to significant others and such rigid defenses that they are, in fact, immune to grief. A closer examination of the caregiving histories, specific life stressors, coping strategies, and variation in reported mental health symptoms may help to tease out the differences Bowlby articulated between those who adeptly minimize emotions and those whose emotional lives are simply shallow.

A related avenue of further exploration arises from the fact that the majority of adolescents in this sample reported a number of relatives and non-relatives whom they considered providing significant caretaking to them at various periods of their lives. Some of these relatives provided care in lieu of biological parents while others provided care that overlapped with one or both biological parents. While the present study only examined disruption in care by the earliest caregiver (in 90% of cases this was the biological mother), the number, nature, and extent of these other relationships could provide information as to how they may have acted as protective or risk factors (e.g., in relation to attachment style or mental health symptoms). Extended family systems whose members provide social and instrumental support to children and parents are a cultural feature of many African-American (e.g, Wilson, 1986, 1989) and Hispanic families (e.g., Vidal, 1988). However, a recent cross-sectional study found that school-aged children of symptomatic African-American mothers with AIDS had increasingly more externalizing and internalizing disorders as the number of adults in the household increased (Dorsey, Chance, Forehand, Morse, & Morse, 1999). Dorsey and colleagues speculate that the adjustment problems could be related to the worsening health of the mother, which necessitated an increase in the number of adults in the household. Alternatively, the researchers suggest, additional adults may bring to the household additional burdens such as their own financial or health problems. The impact that these relationships may have had on the development of attachment styles, coping patterns, and mental health in the present sample is an area of further exploration.

These young people are in need of supportive services to help them forge satisfactory relationships and positive identities as they begin their adult years. The high level of avoidance found in this sample makes the provision of psychotherapy more difficult as they are likely to deny their need for help. Threatened or actual parental death may be sufficient motivation for some adolescents to seek support. Group therapy before and after parental death with other adolescents dealing with parental AIDS may be the most appropriate modality of treatment. These groups can help normalize the phenomena of dealing with a parent who is coping with, or has died from, a highly stigmatized disease such as AIDS and confront the pros and cons of disclosing this fact to others. Moreover, the findings of the present study also point to the utility of increasing the repertoire of coping skills for bereaved adolescents (especially girls) whose use of ruminative and distancing strategies appears to be contributing to their mental distress. For the bereaved adolescents in particular, supportive group therapy with other parentally bereaved adolescents may assist in normalizing emotions and experiences and learning new strategies for coping with grief and with the task of moving on with life. These groups may also help adolescents accept the reality of the loss; experience grief in a supportive environment; express conflicting emotions such as sadness, relief, guilt, failure, loneliness, and rejection; adjust to daily life without the deceased parent; and set short and long term educational and career goals.

The study also makes clear that caregivers who are warm and caring assist bereaved adolescents in their grieving process. This finding has significant implications for adolescents coping with a terminally ill parent as the planning for supportive and invested

after-death caretaking will have significant long term consequences for them once their parent has died. Intervention with terminally-ill parents and adolescents which focuses on post-death caretaking arrangements is an important area of service provision to these families.

Although the present study makes a unique contribution to the attachment literature since it focuses on a sample that has received little attention, caution must be used in generalizing the results of this study to all adolescents. The high degree of attachment insecurity, particularly the fearful type, has not been documented in other studies.

A further limitation involves the absence of a particular stressor in the measurement of coping strategies. First, participants were asked about the ways in which they coped with general life problems, not specific stressors, thus, the appraisal of a stressor as easy or difficult to deal with was not measured. Appraisal has been cited as a key component in the coping process and has been found to influence the type of strategy an individual uses (Folkman & Lazarus, 1985). Moreover, individuals with different attachment styles may differ in the extent to which they appraise a situation as threatening and their ability to deal with it (Mikulincer & Florian, 1995). In addition, the impact of attachment style on coping may vary according to whether or not the stressor involves a threat to an attachment relationship. Related to this is Bowlby's (1980) contention that attachment patterns are activated in response to stress and the reporting here of coping strategies unrelated to a specific stressor (hypothetical or actual) may limit the observed relationship between coping and attachment. Future studies should focus on a direct

examination of the strategies these adolescents use in coping with various aspects of parental illness (e.g., repeated hospitalizations, chronic fatigue, difficult medication regimens) and for the bereaved, specific aspects of their lives now that their parents are gone (e.g., living situations, finances, school/work, friend/romantic relationships, sexual relationships, substance use). Comparing reports of the coping strategies used to deal with general life problems, as studied here, with reports of coping with these specific aspects of having and losing a parent from AIDS, would enrich our understanding of how coping with situationally-specific problems differs from coping with general life stressors. Moreover, this data may provide valuable insight into thoughts and behaviors that may put these adolescents at risk for contracting HIV, thereby helping to develop strategies for prevention.

Finally, it should be noted that the partial mediation model proposed here does not take into account the amount of measurement error in the mediator variable which may have produced an underestimate of the effect of the mediator and an overestimate of the effect of the independent variable on the dependent variable (Baron & Kenny, 1986). The use of a structural modeling technique might serve to reduce the measurement error inherent in the mediator variable (Tabachnick & Fidell, 1996).

APPENDIX A

PRIMARY CAREGIVERS

INTERVIEWER READ: "Now we are going to talk about the caregiver or caregivers who had primary responsibility for you over your lifetime. Primary caregivers are defined as the following:

1. People who you lived with
2. People who set rules and disciplined you
3. People who had the authority to make major decisions about your life, for example where you go to school, and
4. People who significantly contributed financially to raising you.

1. Please list for me the caregiver or caregivers in your life; that is, the person or people who raised you [Enter names in column 1 in chart. Note: if youth names a couple (such as "parents") code woman (or mother) as CG#1 and man (or father) as CG#2]

   [INTERVIEWER: ASK Q. 2-6 FOR CG#1, THEN CG#2, ETC.]

2. Did you ever live with [CG#1]? [Code in column 2]

   1. No
   2. Yes

3. At what ages did you and [CG#1] live together? [Code in column 3]

4. For how many years did you live together? [Code in column 4]

5. For how many years did (he/she) care for you? [Code in column 5]

6. Did [CG#1] set rules and discipline you? [Code in column 6]

   1. No
   2. Yes
   8. N/A
   9. D/K

7. Did [CG#1] have the authority to make major decisions about your life? [Code in column 7]

   1. No
   2. Yes
   8. N/A
   9. D/K

8. Did [CG#1] significantly contribute financially to raising you? [Code in column 8]

   1. No
   2. Yes
   8. N/A
   9. D/K

CAREGIVER (Q.1)	LIVE WITH? (Q.2) I=NO; 2=YES	WHAT AGES? (Q.3) (**SEE NOTE BELOW)	TOTAL YRS. LIVE WITH (Q.4)	TOTAL YRS. CARED FOR (Q.5)	RULES/ DISCIPLINE? (Q.6) I=NO; 2=YES; 8=N/A; 9=D/K	DECISIONS? (Q.7) 1-NO; 2=YES; 8=N/A; 9=D/K	FINANCIAL? (Q.8) I=NO; 2=YES; 8=N/A; 9=D/K
CG#1 NAME: _____ RELATIONSHIP: _____	I 2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	____ ____	____ ____	1 2 8 9	1 2 8 9	1 2 8 9
CG#2 NAME: _____ RELATIONSHIP: _____	I 2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	____ ____	____ ____	1 2 8 9	1 2 8 9	1 2 8 9
CG#3 NAME: _____ RELATIONSHIP: _____	1 2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	____ ____	____ ____	1 2 8 9	1 2 8 9	1 2 8 9
CG#4 NAME: _____ RELATIONSHIP: _____	I 2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	____ ____	____ ____	1 2 8 9	1 2 8 9	1 2 8 9

**INTERVIEWER NOTE:
IF AGES FOR QUESTION 3 OVERLAP (I.E. AGE 6 IS CIRCLED FOR MORE THAN ONE CAREGIVER), FIND OUT IF PARTICIPANT LIVED WITH 2 OR MORE CAREGIVERS AT ONE TIME AND SPECIFY LIVING SITUATION:

_____

_____

9. Who do you consider was your MAIN caregiver growing up?

[RECORD RESPONSE:_____]

[INTERVIEWER CODE RESPONSE. DO NOT READ THE LIST. CAN BE MORE THAN ONE]

		NO	YES
1.	*Mother*	*1*	*2*
2.	*Father*	*1*	*2*
3.	*Grandparent*	*1*	*2*
4.	*Step-parent*	*1*	*2*
5.	*Another relative [specify_____]* ...	*1*	*2*
6.	*Other [specify_____]*	*1*	*2*

10. Who do you consider your primary caregiver now? [Code one response]

[RECORD RESPONSE:_____]

[INTERVIEWER CODE RESPONSE. DO NOT READ THE LIST. CAN BE MORE THAN ONE]

		NO	YES
1.	*Mother*	*1*	*2*
2.	*Father*	*1*	*2*
3.	*Grandparent*	*1*	*2*
4.	*Step-parent*	*1*	*2*
5.	*Another relative [specify_____]* ...	*1*	*2*
6.	*Other [specify_____]*	*1*	*2*
7.	*No one, I am on my own*	*1*	*2*

11. Does anyone else have at least partial responsibility for you?

APPENDIX B

MULTI-ITEM MEASURE OF ADULT ATTACHMENT (Brennan, et al., 1998)

INTERVIEWER READ: "The following statements concern how you feel in close relationships. We are interested in how you generally experience close relationships, not just in what is happening in a current relationship. Respond to each statement by indicating how much you agree or disagree with it. Choose a number from 1 to 7 where 1 means you *strongly disagree*, 4 means you are *mixed*, and 7 means you *strongly agree*."

[SHOW HAND CARD]

	strongly disagree			mixed			strongly agree
1. I prefer not to show others how I feel deep down.	1	2	3	4	5	6	7
2. I worry about being abandoned.	1	2	3	4	5	6	7
3. I am very comfortable being close to others.	1	2	3	4	5	6	7
4. I worry a lot about my relationships.	1	2	3	4	5	6	7
5. Just when others start to get close to me I find myself pulling away	1	2	3	4	5	6	7
6. I worry that close others won't care about me as much as I care about them.	1	2	3	4	5	6	7
7. I get uncomfortable when others want to be very close	1	2	3	4	5	6	7
8. I worry a fair amount about losing others who are close to me.	1	2	3	4	5	6	7
9. I don't feel comfortable opening up to close others.	1	2	3	4	5	6	7
10. I often wish that close others' feelings for me were as strong as my feelings for them.	1	2	3	4	5	6	7
11. I want to get close to others but I keep pulling back	1	2	3	4	5	6	7
12. I often want to merge completely with others I am close to and this sometimes scares them away	1	2	3	4	5	6	7
13. I am nervous when others get too close	1	2	3	4	5	6	7
14. I worry about being alone	1	2	3	4	5	6	7
15. I feel comfortable sharing my private thoughts and feelings with others who I feel close to	1	2	3	4	5	6	7
16. My desire to be close sometimes scares people away.	1	2	3	4	5	6	7
17. I try to avoid getting too close to others	1	2	3	4	5	6	7
18. I need a lot of reassurance that I am loved	1	2	3	4	5	6	7
19. I find it relatively easy to get close to others	1	2	3	4	5	6	7

20. Sometimes I feel that I force others to show more feeling toward me	1	2	3	4	5	6	7
21. I find it difficult to allow my self to depend on close others	1	2	3	4	5	6	7
22. I do not often worry about being abandoned	1	2	3	4	5	6	7
23. I prefer not to be too close to others	1	2	3	4	5	6	7
24. If I can't get close others to show interest in me, I get upset or angry	1	2	3	4	5	6	7
25. There is a close other that I tell just about everything to	1	2	3	4	5	6	7
26. I find that others do not want to get as close to me as I would like	1	2	3	4	5	6	7
27. I usually discuss my problems and concerns with a close other	1	2	3	4	5	6	7
28. When I'm not involved in a relationship, I feel somewhat anxious and insecure	1	2	3	4	5	6	7
29. I feel comfortable depending on close others	1	2	3	4	5	6	7
30. I get frustrated when a close other is not around as much as I would like	1	2	3	4	5	6	7
31. I don't mind asking a close other for comfort, advice, or help	1	2	3	4	5	6	7
32. I get frustrated when a close other is not available when I need them	1	2	3	4	5	6	7
33. It helps me to turn to close others in times of need	1	2	3	4	5	6	7
34. When close others disapprove of me, I really feel bad about myself	1	2	3	4	5	6	7
35. I turn to close others for many things, including comfort and reassurance	1	2	3	4	5	6	7
36. I resent it when close others spend time away from me	1	2	3	4	5	6	7

37. When you answered the above questions, were you thinking of one particular person or more than one person?

1. One person..... 1
2. More than one person..... 2
3. No one in particular.....3

38. Who were you thinking about? [RECORD VERBATIM]

Name(s): _____Relationship(s):_____

APPENDIX C

RELATIONSHIP QUESTIONNAIRE (Bartholomew & Horowitz, 1991)

INTERVIEWER READ: "Now I'm going to ask you how you are in relationships. Please rate each of the following relationship styles according to how much you think each description corresponds to your general relationship style. Give me a number from 1 to 7, where 1 means it is *not at all like you* and 7 means it is *very much like you*."
INTERVIEWER NOTE: IF PARTICIPANT ANSWERS USING WORDS, SAY "GIVE ME A NUMBER FROM 1 TO 7"
[SHOW HAND CARD]

1. I want to be completely emotionally intimate with others, but I often find that others don't want to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

1	2	3	4	5	6	7
Not at all like me			Somewhat like me			Very much like me

2. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

1	2	3	4	5	6	7
Not at all like me			Somewhat like me			Very much like me

3. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

1	2	3	4	5	6	7
Not at all like me			Somewhat like me			Very much like me

4. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

1	2	3	4	5	6	7
Not at all like me			Somewhat like me			Very much like me

5. Looking at the four descriptions above, please choose the *one* that *best* describes your style of being in relationships. [INTERVIEWER CODE ONE]

1	2	3	4

APPENDIX D

PARENTAL BONDING INSTRUMENT (Parker, et al., 1979)

[INTERVIEWER NOTE: THE FOLLOWING QUESTIONS REFER TO THE PARENT WHO IS THE PARTICIPANT IN THE STUDY.]
[INTERVIEWER READ: "The next part is a list of attitudes and behaviors of parents. Thinking about your [(mother\mother figure)/(father/ father figure)], please tell me whether a statement is *very unlike* your (mother/father), *somewhat unlike* your (mother/father), *somewhat like* your (mother/father), or *very like* (her/him) during the past three months."]

1. First, please tell me who you are thinking about **[CIRCLE ONE]**:
   - Biological Mother 1
   - Biological Father 2
   - Step Mother 3
   - Step Father 4
   - Foster Mother 5
   - Foster Father 6
   - Aunt 7
   - Uncle 8
   - Grandmother 9
   - Grandfather 10
   - Sister 11
   - Brother 12
   - Other (Specify:_____) 13

2. During the past three months, your _____

		Very Unlike	Somewhat Unlike	Somewhat Like	Very Like
a.	Speaks to you with a warm and friendly voice.	1	2	3	4
b.	Does not help you as much as you need.	1	2	3	4
c.	Lets you do those things you like doing.	1	2	3	4
d.	Seems emotionally cold to you.	1	2	3	4
e.	Appears to understand your problems and worries.	1	2	3	4
f.	Is affectionate to you.	1	2	3	4
g.	Likes you to make your own decisions.	1	2	3	4
h.	Does not want you to grow up.	1	2	3	4
i.	Tries to control everything you do.	1	2	3	4
j.	Invades your privacy.	1	2	3	4
k.	Enjoys talking things over with you.	1	2	3	4
l.	Frequently smiles at you.	1	2	3	4
m.	Tends to baby you.	1	2	3	4
n.	Does not seem to understand what you need or want.	1	2	3	4
o.	Lets you decide things for yourself.	1	2	3	4
p.	Makes you feel you are not wanted.	1	2	3	4
q.	Can make you feel better when you are upset.	1	2	3	4
r.	Does not talk to you very much.	1	2	3	4
s.	Tries to make you dependent on her.	1	2	3	4
t.	Feels you could not look after yourself unless she is around.	1	2	3	4
u.	Gives you as much freedom as you want.	1	2	3	4
v.	Lets you go out as often as you want.	1	2	3	4

w.	Is over-protective of you.	1	2	3	4
x.	Does not praise you.	1	2	3	4
y.	Lets you dress in any way you please.	1	2	3	4

APPENDIX E

DEALING WITH PROBLEMS (Murphy, Rotheram-Borus, & Reid, 1995)

INTERVIEWER READ: "Everybody has problems that they need to deal with. The following questions are about what some people do to help them deal with problems they have. For example, some people react emotionally, like crying and getting upset all the time, while others deal with problems differently, like getting high or drunk often. Please tell me what you have done to help you deal with the problems you have.

[SHOW HAND CARD #20] Take a look at the card and tell me if you have *never*, *sometimes*, *often*, *very often*, or *always* done any of the following things to help you deal with your problems within the past three months."
[CIRCLE ONE FOR EACH COLUMN]

1 - Never
2 - Sometimes
3 - Often
4 - Very Often
5 - Always

	Past three months
1. Prayed hard for a good ending to the situation [5]	1 2 3 4 5
2. Went to a friend or professional to help you feel better [4]	1 2 3 4 5
3. Talked with others with problems like yours [4]	1 2 3 4 5
4. Tried to reduce tension by drinking more than usual [3]	1 2 3 4 5
5. Thought about the positive changes you have made since the problem started [1]	1 2 3 4 5
6. Formed a plan of action in your mind [1]	1 2 3 4 5
7. Cared more about having time to do the things you want to do each day [1]	1 2 3 4 5
8. Thought more about the meaning of life [1]	1 2 3 4 5
9. Cared more about yourself as a person [1]	1 2 3 4 5
10. Tried to reduce tension by smoking cigarettes more than usual [3]	1 2 3 4 5
11. Trusted your belief in God [5]	1 2 3 4 5
12. Tried to reduce tension by taking drugs more than usual [3]	1 2 3 4 5

13. Began solving problems you avoided before [1]	1	2	3	4	5
14. Tried to understand what brought on your problems [2]	1	2	3	4	5
15. Depended on others to cheer you up and make you feel better [2]	1	2	3	4	5
16. Tried to understand how others with problems like yours were thinking and feeling [4]	1	2	3	4	5
17. Went to a support group [4]	1	2	3	4	5
18. Decided to make your mark on the world [1]	1	2	3	4	5
19. Daydreamed about better times in the past [2]	1	2	3	4	5
20. Went over your problem again and again in your mind and couldn't stop thinking about it [2]	1	2	3	4	5
21. Used drugs more to forget [3]	1	2	3	4	5
22. Went to a therapist, counselor or social worker [4]	1	2	3	4	5
23. Thought a lot more about what is really important in your life [1]	1	2	3	4	5
24. Traded sex for drugs or money [3]	1	2	3	4	5
25. Decided to get your life more together than it was in the past [1]	1	2	3	4	5
26. Improved your eating habits [1]	1	2	3	4	5
27. Planned ways to kill yourself [3]	1	2	3	4	5
28. Tried to figure out how to make your mark in the world [1]	1	2	3	4	5
29. Tried to believe it would go away [2]	1	2	3	4	5
30. Worked on reaching a bargain or compromise with some higher being (like God) to change things [5]	1	2	3	4	5
31. Started going to your place of worship. (You might worship at a church, a synagogue, a mosque, or some other place.) [5]	1	2	3	4	5

Note: Superscript refers to the factor that the item loads on: [1]Positive Action; [2] Passive Problem Solving; [3]Self-Destructive Escape; [4]Social Support; [5] Spiritual Hope.

APPENDIX F

SUPPLEMENTARY DEALING WITH PROBLEMS
(Murphy, Rotheram-Borus, & Marelich, 1995)

INTERVIEWER READ: "(In the main interview we ask/now I'm going to ask) you questions about what some people do to help them with the problems they have. For example, some people react emotionally, like crying and getting upset all the time. Here are some other ways people deal with the problems they have.

[SHOW HAND CARD #20] Take a look at the card and tell me if you have *never*, *sometimes*, *often*, *very often*, or *always* done any of the following things to help you deal with your problems within the past three months."
[CIRCLE ONE FOR EACH COLUMN]

1 - Never
2 - Sometimes
3 - Often
4 - Very Often
5 - Always

	Past three months
1. Believed that time would make a difference and that the best thing to do was wait.	1 2 3 4 5
2. Felt depressed and didn't want to move.*	1 2 3 4 5
3. Tried to keep others from knowing how you were feeling.	1 2 3 4 5
4. Felt afraid of what you might face.*	1 2 3 4 5
5. Deliberately got mad and yelled at people about little things to blow off steam. *	1 2 3 4 5
6. Figured out ways to hide your problem from others.	1 2 3 4 5
7. Tried to reduce tension by sleeping more than usual.*	1 2 3 4 5
8. Tried to keep it from bothering or upsetting you.	1 2 3 4 5
9. Thought about how you could have done things differently.	1 2 3 4 5
10. Began to have irregular sleep patterns. *	1 2 3 4 5
11. Turned to work or other activities to keep your mind off things.	1 2 3 4 5
12. Hated the world. *	1 2 3 4 5
13. Refused to think about it. *	1 2 3 4 5

*Indicates items which loaded on "Detachment" factor used in all analyses.

APPENDIX G

TEXAS REVISED INVENTORY OF GRIEF (Faschingbauer, et al., 1987)

1. *INTERVIEWER CODE: Is participant's parent (i.e., parent in study) still alive?*

    1. Parent deceased . . . . . 1 [continue]
    2. Parent alive . . . . . 2 [SKIP to Q.3]

2. How old were you when your (mother/father) died? [REFERS TO PARENT IN STUDY]

3. Is your (other parent) still alive?

    1. Other parent deceased 1
    2. Other parent alive . . . . . 2 [SKIP TO Q.5]
    9. Don't Know . . . . . 9 [SKIP TO Q.5]

4. How old were you when your (other parent) died?

5. *INTERVIEWER CODE: IS EITHER PARENT DECEASED, AS FAR AS TEEN KNOWS?*

    1. NO, BOTH PARENTS ALIVE . . . . . 1 [SKIP TO PREGNANCY AND PARENTHOOD]
    2. YES, ONE OR BOTH PARENTS ARE DECEASED. . . . [CONTINUE]

INTERVIEWER READ: "I am now going to ask you a few [more] questions about the death of your parent(s). We are trying to learn as much as we can about how people cope with parental death. The questions take only a couple of minutes to answer, and then we'll focus on something else."

6. (question omitted)

Texas Inventory

7. Looking back, would you say your relationship with your parent(s) was: [READ EACH AND CODE ONE. TIG]

    1. Closer than any relationship you ever had before or since 1

    2. Closer than most relationships you had with other people 2

    3. About as close as most of your relationships with others 3

    4. Not as close as most of your relationships 4

    5. Not very close at all 5

INTERVIEWER READ: I am going to ask you a few more questions about the loss of your parent. I would now like you to describe your current feelings about the loss of your parent(s) by choosing one of the words on this card for each of the sentences I will read you. Please tell me whether each statement is *completely false*, *mostly false*, *partly true and partly false*, *mostly true*, or *completely true* for you.

[SHOW HAND CARD]

	False	Compl. False	Mostly Part. F	Part T. True	Mostly True	Compl.
8. No one will ever take (his/her) place in my life		1	2	3	4	5
9. I very much miss (him/her)		1	2	3	4	5
10. I've never known (a better person)		1	2	3	4	5
11. Sometimes, I dream about (him/her)		1	2	3	4	5
12. I can't avoid thinking about (him/her)		1	2	3	4	5
13. I feel it's unfair that (he/she) died		1	2	3	4	5
14. Even now it's painful to recall memories of (him/her)		1	2	3	4	5
15. Things and people around me still remind me of (him/her)		1	2	3	4	5
16. I feel I will never get over (his/her) death		1	2	3	4	5
17. I still get upset when I think about (him/her)		1	2	3	4	5
18. At times, I feel the need to cry for (him/her)		1	2	3	4	5
19. At times, I can't believe (he/she) died		1	2	3	4	5
20. At times, I feel as though (he/she) is still with me		1	2	3	4	5

21. In addition to your parent, has someone important to you ever died?

1. No ..... 1 [skip to Q.15a]
2. Yes 2

22. Who was this person or were these people? [WRITE RESPONSE VERBATIM]

_____

23. INTERVIEWER CODE NUMBER OF IMPORTANT PEOPLE WHO DIED FROM Q. 1, 3, & 22

____ ____ people

[end of section]

APPENDIX H

BRIEF SYMPTOM INVENTORY (Derogatis & Spencer, 1993)

[INTERVIEWER READ: "I am going to read a list of problems and complaints that people sometimes have. For each one, tell me how much that problem has bothered you during the past week, including today. Please tell me whether each problem has bothered you *not at all*, *a little bit*, *moderately*, *quite a bit*, or *extremely*."]
[SHOW HAND CARD #12]

		Not at All	A little Bit	Moderately	Quite A bit	Extremely
1.	Nervousness or shakiness inside.	0	1	2	3	4
2.	Faintness or dizziness.	0	1	2	3	4
3.	The idea that someone else can control your thoughts.	0	1	2	3	4
4.	Feeling others are to blame for most of your troubles.	0	1	2	3	4
5.	Trouble remembering things.	0	1	2	3	4
6.	Feeling easily annoyed or irritated.	0	1	2	3	4
7.	Pains in heart or chest.	0	1	2	3	4
8.	Feeling afraid in open spaces.	0	1	2	3	4
9.	Thoughts of ending your life.	0	1	2	3	4
10.	Feeling that most people cannot be trusted.	0	1	2	3	4
11.	Poor appetite.	0	1	2	3	4
12.	Suddenly scared for no reason.	0	1	2	3	4
13.	Temper outbursts that you could not control.	0	1	2	3	4
14.	Feeling lonely even when you are with people.	0	1	2	3	4
15.	Feeling blocked in getting things done.	0	1	2	3	4
16.	Feeling lonely.	0	1	2	3	4
17.	Feeling blue.	0	1	2	3	4
18.	Feeling no interest in things.	0	1	2	3	4
19.	Feeling fearful.	0	1	2	3	4
20.	Your feelings being easily hurt.	0	1	2	3	4
21.	Feeling that people are unfriendly or dislike you.	0	1	2	3	4
22.	Feeling inferior to others.	0	1	2	3	4
23.	Nausea or upset stomach.	0	1	2	3	4
24.	Feeling that you are watched or talked about by others.	0	1	2	3	4
25.	Trouble falling asleep.	0	1	2	3	4
26.	Having to check and double check what you do	0	1	2	3	4

27.	Difficulty in making decisions	0	1	2	3	4
28.	Feeling afraid to travel on buses, subways, or trains	0	1	2	3	4
29.	Trouble getting your breath	0	1	2	3	4
30.	Hot or cold spells	0	1	2	3	4
31.	Having to avoid certain things, places, or activities because they frighten you	0	1	2	3	4
32.	Your mind going blank	0	1	2	3	4
33.	Numbness or tingling in parts of your body	0	1	2	3	4
34.	The idea that you should be punished for your sins	0	1	2	3	4
35.	Feeling hopeless about the future	0	1	2	3	4
36.	Trouble concentrating	0	1	2	3	4
37.	Feeling weak in parts of your body	0	1	2	3	4
38.	Feeling tense or keyed up	0	1	2	3	4
39.	Thoughts of death or dying	0	1	2	3	4
40.	Having urges to beat, injure, or harm someone	0	1	2	3	4
41.	Having urges to break or smash things	0	1	2	3	4
42.	Feeling very self-conscious with others	0	1	2	3	4
43.	Feeling uneasy in crowds	0	1	2	3	4
44.	Never feeling close to another person	0	1	2	3	4
45.	Spells of terror or panic	0	1	2	3	4
46.	Getting into frequent arguments	0	1	2	3	4
47.	Feeling nervous when you are left alone	0	1	2	3	4
48.	Others not giving you proper credit for your achievements	0	1	2	3	4
49.	Feeling so restless you could not sit still	0	1	2	3	4
50.	Feelings of worthlessness	0	1	2	3	4
51.	Feeling that people will take advantage of you if you let them	0	1	2	3	4
52.	Feelings of guilt.	0	1	2	3	4
53.	The idea that something is wrong with your mind	0	1	2	3	4

APPENDIX I

PEARSON PRODUCT-MOMENT CORRELATIONS OF BRIEF SYMPTOM INVENTORY SCALE SCORES

Scale	2	3	4	5	6	7	8	9	10
1. BSI Global Severity Index	.77	.89	.80	.87	.84	.76	.70	.80	.86
2. Somatization	-	.69	.49	.57	.72	.51	.60	.53	.59
3. Obsessive-Compulsive	-	-	.60	.76	.71	.63	.59	.63	.73
4. Interpersonal Sensitivity	-	-	-	.68	.67	.51	.63	.70	.68
5. Depression	-	-	-	-	.67	.63	.55	.62	.79
6. Anxiety	-	-	-	-	-	.57	.73	.59	.69
7. Hostility	-	-	-	-	-	-	.35	.61	.60
8. Phobic Anxiety	-	-	-	-	-	-	-	.44	.60
9. Paranoid Ideation	-	-	-	-	-	-	-	-	.63
10. Psychoticism	-	-	-	-	-	-	-	-	-

Note. N = 196. All r's significant at p ≤ .01.

APPENDIX J

TRANSFORMATIONS OF SKEWED VARIABLES

Variable/ Transformation	N	M	SD	Skewness	Kurtosis
Self-Destructive Escape/ Square Root	170	1.08	.18	2.74	8.33
Self-Destructive Escape/ Logarithmic	170	.14	.28	2.29	5.13
BSI/ Square Root	196	.53	.33	.78	.18
BSI/ Logarithmic	196	-1.68	1.38	-.35	-.91
Detachment/ Square Root	192	1.29	.26	.88	.19
Detachment/Logarithmic	192	.47	.38	.51	-.53

APPENDIX K

PARENTAL CONSENT FOR ADOLESCENT FORM

PROJECT TALK: ASSESSMENT

Parent/Guardian's Follow-Up Informed Consent for Unemancipated Youths

Statement of Research: I have been asked for my child/ward, _____, to participate in a study about how parents and teens cope with a parent being diagnosed with an HIV-related illness or with AIDS. I understand that the reason my child is being asked to participate in this research study is that I have been recently diagnosed with an HIV-related illness or with AIDS, although my child may not know this.

Study Procedures: I have already been asked if my child may talk with a staff member from The Family Studies Unit/HRRP/UCLA and fill out questionnaires every three months for two years. I am now being asked if my child may participate in additional follow-up interviews every six months for up to three more years.

The interview will include questions about sexual and drug using behaviors, and about emotions, mood, thoughts and feelings, friends and family, background, health related activities, and education. Some of these interviews will be done at home, others will be done by telephone. The follow-up interviews will last about 1 hour.

If my illness should become incapacitating, or if I should die, my child's new legal guardian would be asked for permission for my child continue in this study.

Potential Risks: Although the teen's interviews do not mention my health or HIV/AIDS, by participating it is possible that he/she will realize my health status, if he/she does not know already. If this occurs, my child may experience fear, anger, or depression as a result of learning about it. My child also may find it useful to talk about his/her personal life even though parts of the interview may cause discomfort.

Potential Benefits: This research may help us learn about how individuals and families cope with illness, including HIV and AIDS. It also may help develop needed services for teens and their families who are dealing with illnesses including HIV/AIDS.

Availability of Investigator: Dr. Rotheram-Borus is available to answer any questions about the study at any time. Her address is as follows: Department of Psychiatry, UCLA Neuropsychiatric Institute, 760 Westwood Plaza, Los Angeles, CA 90024-1759; tel. (310) 794-8278 (office), (310) 794-8297 (fax). Dr. Rotheram-Borus visits New York to supervise this study monthly. She can meet with me and/or my child, by appointment, at those times. My child and/or I can also call the Project Director in New York City toll-free at 800-825-5170. The Project Director, Marya Gwadz, can also answer my questions. Ms. Gwadz can arrange a call from, or a meeting with, Dr. Rotheram-Borus.

Freedom to withdraw consent: I can choose to allow my child to participate or refuse to let my child participate. Similarly, my child may choose or refuse to participate. My child can withdraw at any time from the study or refuse to answer any specific questions. **MY DECISION WHETHER TO ALLOW MY CHILD TO PARTICIPATE WILL IN NO WAY AFFECT SERVICES OR BENEFITS WE RECEIVE FROM THE HUMAN RESOURCES ADMINISTRATION.**

Termination of participation: Circumstances may arise under which my child's/ward's participation may be terminated by Dr. Rotheram-Borus without regard to my consent.

Confidentiality: The information obtained from these interviews will be kept private and confidential. Neither my child's name nor any other identifying information will appear on the same forms where his

HSPC#: G93-09-100-12
Expiration Date: August 2, 1999

or her responses appear: instead an identification number will be assigned to these forms. Second, identifying information about my child and a record of his or her identification number will be kept in a locked file at The Family Studies Unit/HRRP/UCLA. Only authorized members of the New York research team, and no one else, will have access to the identifying information. No one will know what my child says during these interviews except in the two instances detailed below. However, my child is free to discuss anything about this study with anyone.

I understand that no information which identifies my child will be released without my separate consent except as specifically required by law. The law states that if my child reveals current physical or sexual abuse a report will be made to the New York State Administration for Children's Services, and if my child reveals suicidal or homicidal feelings, a report must be made to his/her counselor and/or the appropriate agency or authority. With this exception, all information will be kept confidential.

This study has a certificate of confidentiality from the federal government which means that no court can submit a subpoena for any information which is shared in this study. This does not mean that the Secretary of Health and Human Services endorses this study. The researchers can share identifying information about my child if my child and I consent in writing to disclosing such information; if release is required by the Federal Food, Drug and Cosmetic Act; if authorized personnel from the Department of Health and Human Services request such information for audit or program evaluation or for investigation of the researcher who are carrying out this study. Of course, my child is free to disclose identifying information about him/herself to anyone.

If changes in study occur: If the study design or the use of the collected information is to be changed, I will be so informed and my consent reobtained.

I may be asked if I will allow my child to continue in this study, if it goes on for longer than the time specified in this form. I may be contacted about my child's participation in future phases of this study.

I understand if I have any questions about my child's rights as a research participant, I may call or write to the Office for the Protection of Research Subjects, UCLA, Los Angeles, CA 90095-1694, (310) 825-8714.

Payment for participation: My child will be compensated $25 for each interview completed during the period from three to five years after the first interview (that is, 30 through 60 month follow up periods).

In signing this consent form, I acknowledge receipt of a copy of the form.

Signed_____ Date_____

Interviewer_____

Witness_____
(in case the subject is unable to sign)

HSPC#: G93-09-100-12
Expiration Date: August 2, 1999

APPENDIX L

ADOLESCENT CONSENT FORM

PROJECT TALK: ASSESSMENT
Youth Informed Consent - Follow-Up

Statement of Research: You have been asked to be part of a research study about family health and what it is like for teens to have a parent who is has recently visited a doctor, been sick, or diagnosed with an illness

Study Procedures: You have already been asked to participate in follow-up interviews every three months for two years. You are now being asked to participate in additional follow-up interviews for three more years. The interviews will take place every six months. Some of these interviews will be done at home, others will be done by telephone. The follow-up interviews will last about 1 hour. The interview will include questions about your sexual and drug using behaviors, and about your emotions, mood, how you feel and what you think, social activities, health related activities and education. You may stop participating at any point.

Individuals performing the procedures: Mary Jane Rotheram-Borus, Ph.D. is the Principal Investigator for this study, and a Professor at the University of California, Los Angeles (UCLA). Noelle Leonard and Rossi Hassad are the Project Directors from The Family Studies Unit/Center for Community Health/UCLA in New York City and serves as a contact to Dr. Rotheram-Borus and her research staff. The interviewers from The Family Studies Unit have special training to work on this research project.

Potential Risks: This study does not involve any physical risk to yourself. You might find it useful to talk to someone about your personal life even though parts of the interview may be uncomfortable. Talking about sexual and drug using behaviors may make you feel uneasy.

Potential Benefits: This research may help us learn about how to help teenagers cope with family issues, including issues related to their parent's doctor visits and/or illness. It may help to develop needed services for teens and their families when a parent has an illness.

Videotaping and/or audiotaping: You may be videotaped and/or audiotaped in the process of these research procedures. The purpose of the taping is to allow the study's research staff to check that the study procedures are being followed correctly. No one other than a research staff member will be permitted to view and/or listen to the tape. Your identity will not be disclosed on the tape. The tape and its container will not be labeled with your name. The only information appearing on either will be your study identification number. You have been assured that the tapes will be locked up and will be destroyed after their use in this research project is completed. You have the right to review the tapes made as part of the study to determine whether they should be edited or erased to remove information that may identify you.

Availability of Investigator: Dr. Rotheram-Borus is available to answer any questions about the study at any time. Her address is as follows: Division of Social Psychiatry, Department of Psychiatry, UCLA Center for Community Health, 10920 Wilshire Blvd., Suite 350, Los Angeles, CA 90024; tel. (310) 794-8278 (office), (310) 794-8297 (fax). Dr. Rotheram-Borus visits New York to supervise this study monthly. She could meet with you, by appointment, at those times. You can also call the Project Directors in New York City toll-free at 800-825-5170. The Project Directors, Noelle Leonard and Rossi Hassad, can also answer your questions. They can arrange a call from, or a meeting with Dr. Rotheram-Borus.

Freedom to withdraw consent: You can choose to participate or refuse to participate. Also, you can withdraw at any time from the study. If you do not want to answer any of the specific questions asked in the interview you do not have to answer them. YOUR DECISION TO PARTICIPATE IN THIS STUDY WILL IN NO WAY AFFECT SERVICES OR BENEFITS YOU RECEIVE FROM THE HUMAN RESOURCES ADMINISTRATION.

Termination of participation: Circumstances may arise under which your participation may be terminated by Dr. Rotheram-Borus without regard to your consent.

APPROVED
AUG 2 8 2000

GC-IRB #93-09-100-14A

Confidentiality: The information obtained from these interviews will be kept private and confidential. Neither your name, nor any other identifying information will appear on the same forms where your responses appear Instead an identification number will be assigned to these forms. Second, identifying information about yourself and a record of our identification numbers will be kept in a locked file at The Family Studies Unit. Only authorized members of the New York research team, and no one else, will have access to the identifying information. No one will know what you say during these interviews except in the two instances detailed below. However, you are free to discuss anything about this study with anyone.

No information which identifies you will be released without your separate consent except as specifically required by law. The law states that if you reveal current physical or sexual abuse a report will be made to the New York State Administration for Children's Services, and if you reveal suicidal or homicidal feelings, a report must be made to a counselor and/or the appropriate agency or authority. With this exception, all information will be kept confidential.

This research is covered by a Certificate of Confidentiality issued by the Department of Health and Human Services (DHHS). This Certificate will protect the investigators from being forced to release any research data in which you are identified, even under court order or subpoena without your written consent. This protection, however, does not prohibit the investigators from voluntarily reporting information about suspected or known sexual or physical abuse of a child or a subject's threatened violence to self of others. If any member of the program staff has or is given such information they will report that information to the proper authorities.

If changes in study occur: If the study design or the use of the collected information is to be changed, you will be so informed and your consent reobtained.

If you have any questions about your rights as a research participant, you may call or write to the Office for the Protection of Research Subjects, UCLA, Los Angeles, CA 90095-1694, (310) 825-8714.

Payment for participation: You will be compensated $25 for each interview completed.

In signing this consent form, you acknowledge receipt of a copy of the form.

Signed_____ Date_____

Interviewer_____

Witness_____
(in case the subject is unable to sign)

GC-IRB #93-09-100-14A
Exp. date: 7/20/2001

APPENDIX M

UCLA HUMAN SUBJECT PROTECTION COMMITTEE APPROVAL LETTER

APPROVAL NOTICE

OFFICE FOR PROTECTION OF RESEARCH SUBJECTS
2107 Ueberroth Building
169407

DATE: August 3, 1998

TO: Mary J. Rotheram-Borus, Ph.D.
Principal Investigator

FROM: Keith T. Kernan, Ph.D.
Chair, General Campus Human Subject Protection Committee

RE: HSPC #G93-09-100-12
Approved by Full Committee Review
(Approval Period from 08/03/1998 **through** 08/02/1999)
Intervention for Adolescents Whose Parents Live with AIDS

Please be notified that the UCLA Institutional Review Board - Human Subject Protection Committee (HSPC) has approved the above referenced research project involving the use of human subjects in research. The UCLA's Multiple Project Assurance (MPA) with the National Institutes of Health, Office for Protection from Research Risks is M-1127.

R. Edward O'Neill

Approval Signature of the HSPC Chair

PRINCIPLES TO BE FOLLOWED BY PRINCIPAL INVESTIGATORS:

As the Principal Investigator, you have ultimate responsibility for the conduct of the study, the ethical performance of the project, the protection of the rights and welfare of human subjects, and strict adherence to any stipulations imposed by the HSPC. You must abide by the following principles when conducting your research:

1. Perform the project by qualified personnel according to the approved protocol.
2. Do not implement changes in the approved protocol or consent form without prior HSPC approval (except in a life-threatening emergency, if necessary to safeguard the well-being of human subjects.)

3. If written consent is required, obtain the legally effective written informed consent from human subjects or their legally responsible representative using only the currently approved UCLA-HSPC stamped consent form.
4. Promptly report all undesirable and unintended, although not necessarily unexpected adverse reactions or events, that are the result of therapy or other intervention, within five working days of occurrence. All fatal or life-threatening events or events requiring hospitalization must be reported to the HSPC in writing within 48 hours after discovery.
5. In clinical medical research, any physician(s) caring for your research subjects must be fully aware of the protocol in which the subject is participating.

FUNDING SOURCE(S):

According to the information provided in your application, the funding source(s) for this research project may include the following: extramural.

PI of Contract/Grant:	Mary Rotheram-Borus
Funding Source:	PHS/National Institute of Mental Health
Contract/Grant No:	5 R01 MH49958-03
Contract/Grant Title:	Intervention for Adolescents Whose Parents Live with AIDS

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